

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1726.—Vol. XXXVIII.

LONDON, SATURDAY, SEPTEMBER 19, 1868.

(STAMPED .. SIXPENCE,
UNSTAMPED .. FIVEPENCE)

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 1842.)

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

FOR SALE, net.—50 Royalton, 18s.; 10 Prosper United, 10s.

MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,
has FOR SALE the following shares, free of commission:—
30 Anglo-Brazilian, 11s. 9d. 100 Frontino, 14s. 6d. 25 Princess of Wales, 4s 6d.
30 Australian United (Gold), 15s. 6d. 10 Gt. No. Downs, £2 1/2. 1 South Caradon, £3 10
20 Chiverton, 13s. 6d. 30 Gawton United, 22s. 25 South Darren, 30s. 6d.
10 Chiverton Moor, 12s. 20 Gt. No. Laxey, 12s. 15 St. John del Rey, £1 1/4
10 Chontales, £2 6s. 3d. 50 Gen. Brazilian, 5s 6d. 20 West Wh. Kitty, 5s.
40 Carn Camborne, 4s 9d. 20 Glasgow Caradon, 17s 20 Wheel Seton, £5 1/4
40 Don Pedro, £3 1s. 25 Gt. Retallack, £3 8s 9d. 25 West. P. of Wales, 7s.
10 East Caradon, £2 17s 6d. 20 Hingston Down, 6s 3d. 20 Wh. Chiverton, 13s 6d.
50 E. Carn Brea, 6s. 6d. 15 Marke Valley, £7 8s 9d. 20 West Chiverton, £2 1/2
25 E. Grenville, £2 12s 6d. 50 New Quebrada, 4s 6d. 25 Wh. Trelawny, £2 1/2
10 East Lovell, £3 12s 6d. 50 No Treskerby, 11s 6d. 25 Wh. Grenville, 25s 6d.
25 East W. Russell, 4s 6d. 25 New Wh. Lovell, 17s. 30 Yudanamutana, £2 19s 6d.
35 Prince of Wales, 37s 6d.
BUYER of West Rose Down.

MR. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MR. G. D. SANDY, STOCK AND SHAREDEALER,
No. 48, THREADNEEDLE STREET, LONDON, E.C.
TAMAR VALLEY SILVER-LEAD MINE.—I can with the utmost confidence recommend these shares for immediate investment at present very low prices. The engine will go to work in about a fortnight, when profitable returns will be at once made.

MESSRS. WILSON, WARD, AND CO.,
STOCK AND SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.
BUYERS of New Great Consols shares.

MR. HENRY MANSELL,
STOCK AND SHAREDEALER,
No. 44, THREADNEEDLE STREET, LONDON, E.C.

JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER,
48, THREADNEEDLE STREET, LONDON, E.C.
Business transacted in the British Funds, Railway and other Stocks, Foreign Bonds, &c., on the usual commission, 1 1/2 per cent. on mining and other shares, above £2; and at £2 and under 6d. per share.
Bankers: London and Westminster, Lothbury.

MR. JAMES HUME, STOCK AND SHAREDEALER,
74, OLD BROAD STREET, LONDON, AND MINING EXCHANGE.
WHEAL MARY FLORENCE.—Full particulars of this rising mine on application to Mr. HUME.
Every description of share negotiated.
Bankers: The London Joint-Stock Bank.

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS,
2, BUCKLESBURY, LONDON, E.C.
LOVELL CONSOLS.—This mine continues to improve, the lode being now worth £30 per fathom. We are desirous our friends and clients should secure an interest without delay. It is beyond doubt that this will be a valuable mine when the lode is cut in the 12 ft. level, and shares must have a great rise in price. Specimens of the tin from the adit level can be seen at our office, and plans of the district can be had on application.

BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD" for September is now ready, and contains a résumé of the Financial Business of the months of July and August, Meetings of Dividend and Progressive Mines, Bank Returns, Interesting Articles on Lovell Consols, Great South Chiverton Mines, and the Recent Gold Discoveries in Queensland and South Africa.
Post free on application.
2, Bucklebury, London, E.C.

JAMES SCOTT AND CO., STOCK AND SHAREDEALERS,
14, PINNER'S HALL, OLD BROAD STREET, LONDON, E.C.
J. S. and Co. are BUYERS and SELLERS, for cash or the account, of shares in any of the undermentioned mines, at quoted or INTERMEDIATE prices (free of commission):—

Anglo-Brazilian	9s	11s	Port Phillip	£18 9	£11 1/2
Bedford Consols	10s	11s 3d	Prosper United	7s 6d	12s 6d
Bedford United	£1 1/2	£1 1/4	Prince of Wales	36s	37s
Chontales	25s	23s	Princess of Wales	2s	3s
Chiverton	(call pd.)	1/2	Rossa Grande	16s 6d	19s
Chiverton Moor	6 1/4	6 1/2	South Caradon	1 1/4	1 3/4
Devon Great Consols	41s	43s	South Darren	1 1/4	1 3/4
Don Pedro	(call div.)	27s	St. John del Rey	18s	19s 1/2
Drake Walls	6s	8s	West Chiverton	60s	61s 1/2
East Caradon	23s	3s	West Caradon	2	2 1/4
East Carn Brea	4s 6d	5s 6d	West Drake Walls	5s	7s
East Grenville	25s	25s	West Prince of Wales	7s	9s
East Lovell	6 1/2	7	West Wheel Seton	150	155
East Russell	3s	3s	Wheal Agar	7s	1
East Seton	3s	1	Wheal Baller	1	7
Frontino and Bolivia	13s	15s	Wh. Chiverton (call pd.)	5	7 1/2
Great Laxey	18s	18s	Wh. Emily Henrietta	27	28
Great Retallack	3 1/4	3 1/4	Wheal Grenville	1 1/4	1 3/4
Great Wheal Vor	11 1/2	12	Wheal Mary Ann	17	18
Lucey Phillips	1 1/2	2 1/2	Wheal Seton	47 1/4	50
Marke Valley	7s	7s	Wheal Trelawny	8	9
North Treskerby	9s	11s	Wheal Uney	1 1/4	1 1/2
North Wheel Crofty	1 1/4	1 1/4	Worthington	3s	3 1/2
Pestarena	17s	21s	Yudanamutana	2 18s 9d	3 13s

Money advanced on marketable mine shares at 5 per cent. per annum.
Buyers can have transfers registered prior to payment, if desired, on giving respectable references.

J. S. and Co. having in their employ several of the most experienced and trustworthy mine agents in the United Kingdom, who periodically inspect on their behalf all the bona fide mines in Devon, Cornwall, and Wales, are enabled to accord to their friends and clients reliable advice as to the present and future prospects of mines they deem worthy the attention of investors.
References will be given to the Alliance Bank and the Bank of England.
J. S. and Co. can recommend several good low-priced shares likely to rise considerably in value within a few months.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S,
BISHOPSGATE STREET, LONDON, E.C. (Established 14 years), has
FOR SALE the FOLLOWING SHARES, at net prices:—
50 Brynpostig, £2 1s 3d 50 Glan Alun, 6s. 3d. 50 Rossa Grande, 3s. 9d.
50 Bedford Con., 12s. 9d. 20 Gt. Retallack, £3 7s 9d. 50 South Herodfoot.
10 Cape Copper. 10 Great Vor, £12 16s 3d. 20 South Darren, 29s.
25 Chontales, £2 6s. 3d. 10 Herodfoot, £23 17s 6d. 20 Tamar Valley, 11s.
10 Chiv. Moor, £2 6s. 3d. 20 Imperial Mining, £1. 1 West Seton, £15s.
20 Don Pedro, £2 8s. 3d. 50 Marke Valley, £7 1/2. 20 Wh. Grenville, 25s. 6d.
50 Drake Walls, 5s. 6d. 20 New Lovell, 15s. 6d. 20 Wh. (St. Agnes), £2 1/2
20 East Caradon, £2 1/2. 1 New Seton, £5 1/2. 20 West Kitty.
30 E. Grenville, 40s. 25 North Treskerby, 10s. 5 Wh. Mary Ann, £1 1/4
5 East Lovell, 40s. 20 North Crofty, 25s. 3d. 1 Wheal Jane, £2 1/2
30 East Russell, 3s. 3d. 40 Prince of Wales, 36s. 9d. 1 Wheal Seton, £4 1/2
20 Frank Mills, 32s. 6d. 50 Prosper United, 8s 9d. 50 Yudanamutana, £3.
50 Frontino, 14s. 9d. 20 Port Phillip, 32s.

And is a BUYER of Tamar Valley, Rose and Chiverton, and West Godolphin shares at market prices.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER of the following shares at net prices:—50 Royalton, 18s. 6d.; 20 Great South Chiverton; 50 Calbeck Fells, 11s. 3d.; 100 West Trevelyan, 8s. 6d.; 100 Glan Alun; 60 Prince of Wales, 37s. 9d.; 70 Camborne Vein, 10s.; 10 Hingston Down; 50 North Chiverton; 55 Okel Tor, 15s.; 2 West Chiverton, £2 1/2; 40 West Drake Walls, 7s. 3d.; 50 East Grenville, £2 1/2; 150 West St. Ives; 10 East Lovell, £7; 5 West Caradon; 20 Rose and Chiverton United; 20 Frank Mills; 100 Redmoor; 50 Bedford Consols; 100 East Bottle Hill; 10 Macneil; 200 Y. Saffin, £23 1/2; 100 Corbar, 2s. 6d.; 210 General Brazilian, 4s.; 80 Frontino and Bolivia, 14s. 9d.; 100 Worthington, 12s. 6d.; 30 Cape Copper; 90 Anglo-Brazilian.
BUYER of Pendown, West St. Ives, Devon Great Consols, and Minera.

CORNISH AND DEVON MINES.—
FOREIGN GOLD MINES.
PETER WATSON'S WEEKLY MINING CIRCULAR AND SHARE LIST—
SYNOPSIS OF CORNISH AND DEVON MINES, of Friday, Sept. 18, No. 497, Vol. X., price 6d. each copy, forwarded on application, contains information on the following mines:—

West Caradon.	Prince of Wales.	Chontales.
Frank Mills.	Wheal Mary Ann.	St. John del Rey.
Great Wheal Vor.	Wheal Trelawny.	Don Pedro.
East Wheal Grenville.	North Wheal Crofty.	Anglo-Brazilian.
East Wheal Lovell.	East Wheal Seton.	Rossa Grande.

With Remarks on Cornish Tin Mines, Advance in the Copper Standard, and Statistical Information on the Tin Trade.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF
RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN
GOVERNMENT BONDS, &c., forwarded to bona fide investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).

(Two in Cornwall and Twenty-one in London.)
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

THE LONDON DAILY RECORD—STOCK AND SHARE
LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

MR. EDWARD COOKE,
FOREIGN AND BRITISH STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.

Deals in all kinds of Foreign Stocks, and the shares of the various Gold Mines, also in the best Dividend and Progressive Mines.
E. C. has SPECIAL BUSINESS in Trumpet Consols, Yudanamutana, Don Pedro, and Frank Mills shares, either as a BUYER or SELLER.
A Price List sent free on application.
Bankers: Alliance Bank.

MR. W. H. CUELLO,
No. 42, CORNHILL, LONDON, E.C.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

WALTER TREGELLAS, 122, BISHOPSGATE STREET
WITHIN, LONDON, E.C., DEALS in all STOCKS AND SHARES,
either for cash or the fortnightly settlement.
Bankers: The Alliance Bank.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE
BROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market price.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.

MR. EMANUEL BEAZLEY,
STOCK AND SHAREDEALER,
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

MR. C. A. POWELL, SHAREDEALER, 78, OLD BROAD
STREET, LONDON, E.C.
BUYER or SELLER of Calbeck Fells, Prince of Wales, Frontino, North Treskerby.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., TRANSACTS BUSINESS
in all kinds of Securities at closest prices.
SPECIAL BUSINESS in North Pool, West Godolphin, Summer Hill, New Lovell, East Seton, Minera, and West Maria and Fortescue shares.
Special Information in respect to North Pool and West Godolphin Mines.

MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,
70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.

References exchanged in any part of the United Kingdom. Parties of whom known respectability can have stock prior to payment if desired.

MATTHEW GREENE, STOCK AND SHAREDEALER,
1, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.
TAMAR VALLEY.—The main features are as follows:—
1.—All preliminary work has been done.
2.—Two fine silver-lead lodes are already discovered; the ore is very rich, containing from 75 to 100 ozs. of silver to the ton.
3.—The mine is supplied with all necessary machinery. The new engine goes to work at the end of this month, and the agent reports that as soon as the mine is in full good profits, which mean good dividends, will be at once made. These facts will, I think, justify me in recommending the purchase of the shares.

INTENDING INVESTORS.—The "FINANCIAL GAZETTE,"
published by Mr. Y. CHRISTIAN, should be consulted with a VIEW to the SAFE EMPLOYMENT OF CAPITAL. It contains Original Articles, a Review of the Money Markets, and a selection of Investments paying 10 to 17 per cent., and such information as is necessary to guide intending investors.
6, Bond-court, Mansion House, London, E.C.
Bankers: Bank of England.

CHONTALES GOLD COMPANY.—FULL PARTICULARS
OF THE DIFFERENT CLASSES OF SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, E.C.

T. R. has BUSINESS in the following shares, and SPECIAL BUSINESS in those marked *.
Anglo-Brazilian. *Frontino and Bolivia. *St. John del Rey.
*Bedford Consols. *Gawton. *West Chiverton.
*Bedford United. *Gonamena. *West Maria and Fortescue.
*Calbeck Fells. *Great North Downs. *Wheal Baller.
*Chiverton Moor. *Marke Valley. *Wheal Grenville.
*Chontales. *North Downs. *Wheal Mary Florence.
*Devon Consols. *North Roskear. *Wheal Seton.
*East Carn Brea. *North Treskerby. *Yudanamutana.
*East Lovell. *Prince of Wales.

BEDFORD CONSOLS.—T. R. is a BUYER of any number of shares at market prices for cash or time on; also of Prince of Wales, West Maria and Fortescue, Chiverton Moor, East Carn Brea, Bedford United, and Calbeck Fells.
There are several good mines in which shares should be bought during the present general depression in mining, as when a reaction sets in (which will, doubtless, be the case very shortly) they must rise in market value upon their own merit, independent of speculative operations.
Parties will do well to consult T. R. as to what shares should be bought and sold.
Money lent upon good mining shares.
Bankers: Bank of England. Office hours 10 to 4.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1859.

English and Foreign Public Securities in any quantities, and of every description, dealt in at the current quotations of the day, free of Commission.
Attention is invited to the system adopted by this Agency, which offers peculiar advantages for the best investment of capital.
FIVE PER CENT. INTEREST allowed upon DEPOSITS of all amounts withdrawable at one month's notice.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
Bank and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

N.B.—No connection whatever with any other office.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

Third Edition, price One Shilling; post-free, fourteen stamps.
MINING FIELDS OF THE WEST:
A PRACTICAL EXPOSITION OF THE
PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON.
Published by CHARLES THOMAS,
At No. 3, Great St. Helen's, London, E.C.

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE,
LONDON, E.C. (Members of the Mining Exchange), STOCK AND
SHAREDEALERS, transact business in all kinds of securities at closest net
prices for cash or account.
SPECIAL BUSINESS in Great Laxey, Anglo-Brazilian, St. John del Rey,
Snafell, and East Phoenix shares.
Bankers: London and County Bank.

SAFE INVESTMENTS FOR CAPITAL.
Dividends can be secured 10 to 20 per cent. per annum on outlay.
Read SHARP'S INVESTMENT CIRCULAR (post free).
It contains all the best paying and safest investments of the day.

CAPITALISTS, SHAREHOLDERS, INVESTORS, TRUSTEES,
Will find this Circular a safe, valuable, and reliable guide, containing every
necessary information upon British and Foreign Stocks and Shares.
GRANVILLE SHARP AND CO., SHAREBROKERS,
32, POULTRY, LONDON, E.C. ESTABLISHED 1852.
Bankers: London and Westminster, Lothbury, London, E.C.

TO SHAREHOLDERS.

TRUMPET CONSOLS (TIN) MINE.
WANTED TO PURCHASE SHARES in this MINE.
Sellers will please state number and lowest price to—
GRANVILLE SHARP AND CO., STOCK AND SHAREDEALERS,
32, POULTRY, LONDON, E.C.

Established Fifteen Years.

MESSRS. WARD AND JACKMAN,
STOCK AND SHAREDEALERS,
No. 1, CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Members of the Mining Exchange, London.

Chontales	2 1/2	2 3/4	Providence	20	22
Chiverton Moor	6 1/4	6 1/2	Port Phillip	1 1/2	1 3/4
Don Pedro	(call div.)	27s	Redmoor	4s	6s
East Caradon	23s	23s	South Herodfoot	3s	1 1/4
East Grenville	25s	25s	St. John del Rey	19	20
East Lovell	6 1/2	7	Tincoff	12 1/2	13
East Seton	3s	3s	West Chiverton	60s	61s
Great Laxey	18s	18s	West Drake Walls	3s 6d	5s 6d
Great Retallack	3 1/4	3 1/4	West Wheal Seton	152 1/2	157 1/2
Great Wheal Vor	11	12	Wheal Basset	60	65
Herodfoot	39	41	Wheal Grenville	25s	27s 6d
Marke Valley	7	7 1/2	Wheal Mary Ann	17 1/2	18 1/2
North Treskerby	8s	10s	Wheal Seton	45	50
North Wheal Crofty	1 1/4	1 1/4	Yudanamutana	2 18s 9d	3 13s
Prince of Wales	36s	38s			

MESSRS. WARD AND JACKMAN are DEALERS in all the above at the close market prices of the day.
Messrs. WARD AND JACKMAN will forward a correct list of closing prices and statistical information GRATUITOUSLY on application.
Sept. 18. Bankers: London and Westminster, Lothbury.

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

ROYALTON.—Mr. THOMPSON has nothing further to add to what he has already said in favour of this company. He continues to advise the purchase of the shares wherever they can be met with.

MR. THOMAS THOMAS,
ASSAYER, &c.,
COPPER ORE WHARVES, SWANSEA.

MR. J. N. MAUGHAN, STOCK AND SHAREBROKER
(Member of the Stock Exchange).
No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE.
Bankers: Messrs. Lambton and Co.

MR. J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

MR. JAMES NANCARROW IS ABOUT TO VISIT NEVADA,
UNITED STATES, and is OPEN to INSPECT any MINING
PROPERTY in that or the adjoining States. Will leave on or about the 26th inst.
Address, Belle Vue House, Shrewsbury.

CAPT. RICHARD TABB has just RETURNED to CORNWALL,
having been engaged during the past two years as MINE AGENT in
NORWAY. He has had much experience in exploring for mines, and is now
OPEN to an ENGAGEMENT, on moderate terms, with any party requiring
his services. He has had over twenty years' experience in Irish Mines.
References.—Mr. A. RICHARDS, Portreath;
Mr. THOMAS ANGOVE, Camborne.
Dated Raingate, Camborne, Sept. 14, 1868.

RAILWAY SHAREHOLDERS, or those thinking of becoming
so, should READ HANNAM and Co.'s JUNE CIRCULAR, free by post
from either of their offices, 449, STRAND, LONDON, W.C., or ROYAL IN-
SURANCE BUILDINGS, MANCHESTER.

FOREIGN STOCKHOLDERS, or those thinking of becoming so, should read
HANNAM and Co.'s JUNE CIRCULAR.

ANGLO-AMERICAN OR ATLANTIC CABLE STOCKS.—All interested in these under-
takings, or about to become so, should read HANNAM and Co.'s MARCH and
APRIL CIRCULARS, as well as JUNE CIRCULAR.

GOLD AND SILVER MINING.—All interested, or wishing to become so, in under-
takings of this character, should read HANNAM and Co.'s JUNE CIRCULAR.
Investments may now be made on peculiarly favourable terms in Idaho and
Nevada respectively, the richest gold and silver producing districts as yet dis-
covered. The properties noted have been carefully selected and reported on by
tried and well-known English agents, and will yield early returns.—Full particu-
lars with JUNE CIRCULAR on application.

MISCELLANEOUS SHARES.—All investors with spare capital and capable of
taking advantage of the opportunities afforded by a panic-stricken community,
should make careful selections of shares now selling at far below their real value.
For particulars see HANNAM and Co.'s JUNE CIRCULAR, which may be had
at either of their offices, 449, Strand, London, W.C., exactly opposite Charing-
cross Station and Hotel, or at Royal Insurance Buildings, Manchester.

MESSRS. THOMAS BONNER AND CO.,
MINING AGENTS, MINERAL SURVEYORS, AND SHAREBROKERS,
LLOYD STREET, COOPER STREET, MANCHESTER.

Messrs. THOMAS BONNER and Co. having been engaged in mining pursuits
and the management of metalliferous mines for upwards of twenty years, their
experience enables them to give their clients the soundest advice. They are
always in a position to negotiate for the buying and selling of mineral prop-
erties in all parts of the world; and they also undertake the floating of companies
for working such properties, if the bona fide prospectus, after careful investiga-
tion, meets their approval.

T. B. and Co. are also dealers in every kind of mining shares, and having an
extensive connection are generally able to deal in shares difficult of sale in the
open market, and invite transactions from holders of this kind of stock.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER,
34, OLD BROAD STREET, and 93, BISHOPSGATE STREET WITHIN,
LONDON, E.C., has FOR ABSOLUTE SALE, free of commission, and is pre-
pared to receive bona fide offers for the same, cash or account, viz.:—5 Rose-
cliff and Tolcarne; 250 East Bottle Hill; 15 Chontales; 50 Prince of Wales; 100
Glan Alun; 145 West St. Ives, cheap; 2 West Chiverton; 50 Tamar Valley; 25
Royalton, cheap; 50 North Treskerby; 130 West Godolphin; 5 Great Rhosconer,
cheap; 150 Wheal St. Vincent, cheap; 2 Wheal Seton; 25 New Chiverton; 25 Im-
perial; 25 South Condurow; 50 Don Pedro; 25 Chiverton; 30 Wheal Ida; 50
Mining Association; 50 West Briton; 30 Chiverton Moor; 3 Nanglies; 50 Wheal
Mary Florence; 50 East Grenville; 55 Great South Chiverton; 50 Frontino and
Bolivia; 40 Minera Union; 20 Montgomeryshire Barytes; and 40 Lovell Consols.
LUCY PHILLIPS.—Those who wish to make money apply at one for advice.
LOVELL CONSOLS.—These shares may be obtained, to a limited extent, through
Mr. B.'s agency, at very remunerative prices to the purchaser.

Original Correspondence.

WORKING MEN'S INTERNATIONAL CONGRESS.

SIR,—This curious assemblage of deputies from working men of many nations, representing every class of extreme opinion, is so important and interesting in its bearings upon the wages question, that I must devote this letter to report briefly and remark upon the discussions as given in the *Times*, regretting I have not the time, nor can I expect you to afford space, to give them half the attention they well deserve. The first meeting, of 73 delegates from England, France, Germany, Switzerland, Italy, and Belgium, took place in Brussels, at 3 o'clock in the afternoon of Sunday, the 6th inst. The headquarters of this association, in which a variety of trades is represented, are apparently at London, amongst the foreign workmen resident there, and a Mr. Jung, of London, was elected president. The yearly report for this their third year was read in English, opening the proceedings. This singular document is a medley of revolutionary politics, socialism, and many of the exploded fallacies of past days, with Trade Unionism, illustrating forcibly my remarks in the first letter of this series on the effects of the character of a conspiracy upon the opinions and conduct of the first Trades Unions in England. From this first stage Trades Unions on the Continent apparently have not advanced; and to the evil influences of this state of things is added a plentiful crop of the extreme political absurdities which took root in the first French revolution, and, though bearing much evil fruit abroad, were generally rejected by the good sense of the working classes in England, even in far darker times than the present. Indeed, these crudities are hatched and nourished by the oppression of despotic Governments, and are soon dissipated by the healthy air of freedom. Of this these discussions give clear proof, for the little good sense leavening the huge mass of absurd crotchets and theories spouted there comes chiefly from Switzerland, Belgium, and Italy. I regret to see England not contributing any fair representation of the advanced intelligence of our working men, but this arises from the element already noticed of foreign workmen, of which the English contingent is mainly composed, who obviously have advanced little, if any, beyond the purling of their countrymen on the Continent. Mr. Ruskin would be far more in his place here than in our social science meetings in England. He would be "a one-eyed monarch of the blind: a triton amongst minnows." His crude theories and most fatuous propositions would here be lauded as oracles, and fairly outdone by the absurdities vented by his hearers. As the *Times* well remarks, in a series of excellent leaders on the proceedings of this Congress, the whole tone of what is uttered breathes the utter absence of any experience of freedom, any reference to existing recognised rights.

In England all this is wholly different, and we are forcibly reminded of the enthusiastic admiration of Montesquieu for the British sense of freedom as his birthright of the soil. And with this sense of right goes the sense of duty. A comparison of the standpoint, as taken by this Congress, with that of our most extreme Chartists, in the times when Chartists were, vividly shows the value of this blessing as saving us from all chance of extreme revolution. Our Chartists, as their very name shows, sought to restore what they alleged to be ruined and corrupted, to claim rights to which they were entitled by the law of the land, which they thought unjustly withheld from them. These delegates seek their foundation of rights in abstract general theories. They are Arabs—their hand against every man, proclaiming war against all Governments, all classes save their own, seeking to destroy where the Chartists aimed to reform. Hence this Congress is a crusade against society as now existing in all its elements. State, church, property, all are in the hands of fancied enemies, and used for the oppression of working men. But this very title of working men needs correction—they properly style themselves *proletariats*—a very meaning word when traced to its origin, originally the title of those citizens in the Roman Republic who had nothing, and could only contribute their *proles* (Latin for children) to the service of the State. An English rated workman with a vote is far above this destitute class; nay, properly belongs to those with whom they are at war—men possessed of some property. Hence the proceedings of this Congress are stamped with all the inconsistent absurdities inevitable in every attempt to make out by discussion the right of the *wants* to all the belongings of the *haves*. The only strict logical argument the case admits of is that of force. The only reply to the robber putting a pistol to your head, with "Your money or your life," is to fight or yield. This is obviously the state of society of savages alone, verifying the remarkable saying of Proudhon, that "property is a theft." The thief who has got his neighbour's money, by this possession at once passes to the class of men of property, whom the next *proletariat* he meets may rob in turn—if he can. This, on close examination, proves to be the foundation on which this International Congress fancies it possible to build a scheme for the benefit of the lowest class. Let us illustrate by a brief review of their proceeding the contradictions and absurdities to which it leads them, pointing out where a gleam of good sense now and then beams through the darkness, encouraging us to hope that by persistence in meetings and discussions, guided by the light of the progress of our working men in England, this International Congress may in time work good out of evil, and arrive at some knowledge of what are really the rights and interests of working men, and what is the best mode of securing them.

From the first word of their yearly report to the last utterance of the speakers debating upon its contents, almost every sentence is inconsistent with what goes before or follows. Beginning with loud complaints of the repression by Government of all their discussions, especially in France, they go on to prove, by the open declaration of war against all institutions and all property, that what they denounce as cruel persecution is merely the exercise of common care for the preservation of society as it exists at present. If their proceedings threaten to assume any prominence or importance they will soon find Brussels and Geneva as fast closed against them as Paris. They will, I suppose, then be driven to London, as the only place where an old Government is so firmly established, and such deserved reliance placed in the good sense of the mass of the people, that liberty of speech is wholly unbridled, unless where directly inciting to breaches of the law. But it will not be safe to carry on their debates here in England, lest some sensible, long-headed workman who may happen to attend a meeting blows their whole fabric into air by a pitiless exposure of their absurdities. Denouncing war as a waste of the resources of a country, they look with complacent approval on social war, the worst and most destructive kind of warfare, and applaud the Fenians, who did all they could to destroy every chance the poorer classes in Ireland were beginning to have of rising to better things, by disturbing the country with turbulent aggressions, rendering life and property insecure. Bitterly denouncing capital and machinery as means of their oppression, they cannot escape from the instinct that without some fund to pay for his work the labourer must starve, and that machinery does much severe and ill-paid work for him. Therefore, they would replace the masters (all along looked on as their worst enemies) by co-operative societies, to possess capital, in the delusion that every man would thus become his own master, and that machinery, in these safe hands, might possibly do them some good. They cannot see this is deserting, in a body, their friends the *proletariats* (of whom a large mass would remain who possess nothing), and passing over to the ranks of the oppressors they denounce, rendering needful fresh congresses of those left in the cold to denounce them in turn. Decriing money wages in a way that would delight Mr. Ruskin's soul, they mostly defend and approve of strikes to get a larger share of these same money wages which they have just declared to be one of the sources of their oppression.

Desiring education, their committee, appointed last year to report on the best means of securing it, frankly confess they have come to a dead lock, and cannot see how to get on. Who is to superintend it? State, clergy, upper classes, all alike denounced and mistrusted. Where is the funds to come from? They see no answer to these questions, and ask another year's time to frame some recommendation. Briefly, they want to get hold of everything, and, if they can help it, neither give nor do anything for it. Nowhere is there any recognition that upon the prosperity of business depends the fund to pay wages, as well as to pay the profit on capital; and that so far the interests of the men agree with those of their masters, and that capital and machinery are the tools of both, to be used as well as possible

for the good of both in securing this common success, without which the masters would be ruined and the workman starve. They utterly fail to see that for this reason, could they succeed, their proceedings are as suicidal as the folly of the drunken man, in Hogarth's print of an election, sawing off the pole on which he sits astride to bring down a rival sign, forgetting he goes to the ground with it.

We have said there are some glimmerings of better sense amongst all these foolish utterances, leading to a hope of many of the follies working themselves out in time. Antwerp, Brussels, and Geneva send reports and delegates, in which some perception is evinced that conciliation is better than striking, that the proposal to do away with banks and lending money on interest may do more harm than good, seeing we have not reached the golden age when men lend for pure love to all that ask, expecting no return. I would point especially to one proof of the honesty of the management of the Geneva combination—they only ask 3d. a week from their members. It is clear there cannot here be a host of paid leaders fattening at the expense of their fellow-workmen.

So, on the whole, we are not unwilling to hope this Congress may yet do some good work in elevating the condition of the working class, if they can only take a departure from their sentimental follies, and take up things as they are in a common sense spirit. Instead of denouncing all the upper classes, let them show some thankful recognition of the helping hands so many amongst these classes now hold out to them. Instead of classing all employers as tyrants, let them gratefully acknowledge the efforts many of them make to promote the good of their workpeople, and strive to extend the numbers of those who are really, if they only had sense to see it, the best friends they have. Let them emulate the sensible proceedings of the great collier meeting reported in the *Mining Journal* of Sept. 5, and "take a leaf out of their book."

Another conclusion may be drawn from these exhibitions of agitation amongst working men in so many forms. The time is now ripe for the formation of really good Trades Unions amongst the masters, holding out the right hand of fellowship to really good Unions amongst their men. The good that might thus be done would be immense, and the best solution would thus soon be found for most of the worst of trade difficulties, especially all arising from ill-will and misunderstanding. I regret being forced to leave unnoticed much interesting matter turning up in this week's news, and defer the concluding remarks on the main points of my subject yet unnoticed to my next letter.—London, Sept. 15. A MAN OF EXPERIENCE.

CAST-IRON AND CAST-STEEL FOR FORTIFICATION PLATES.

SIR,—Almost all armour-plates rolled in the manner hitherto in use contain, especially if of considerable thickness, here and there many flaws, or spaces, where the sides of the thinner plates, or slabs, of which the thick plate is composed or "built up," are not perfectly welded together, such flaws being, of course, a source of weakness to any plate. The chief objection against cast-steel or cast-iron plates consists in their brittleness, I believe, however, that this defect would be considerably neutralised by casting compound plates, such as I proposed some time ago—that is, plates (of greater thickness, of course, than any rolled plates) whose principal bulk is composed of cast-iron or cast-steel, while their shot-exposed front is formed of forged or rolled softer metal. To do this we take a plate of soft iron, place the same (say) in the bottom of the mould, cutting a sufficient number of retaining (dove-tail or otherwise shaped) grooves or indentations into the back of said soft plate, heat the said plate up to such a temperature as to meet all difficulties arising from expansion and contraction, and then run the molten metal into said mould, in such a manner that the molten metal, on cooling, would have completely incorporated the soft metal front facing plate.

I feel convinced, and beg to record it here as my opinion, that such compound plates, whose thickness may be increased to any amount, and where, besides, a very large amount of expensive trimming, planing, &c., is dispensed with, will prove the cheapest and most efficient ones; and, believing that there may be many of your readers willing to compete in supplying metallic armour for defensive purposes, but who may not deem it worth their while to erect expensive plant and machinery for rolling very thick plates, I send you the above hasty remarks.—Sept. 17. G. J. GUNTHER.

TRAMWAYS ON COMMON ROADS.

SIR,—The continually increasing traffic in the public streets, and the enormous wear and tear occasioned thereby upon the ordinary pavement or macadam, has led many to the conclusion that the introduction of street tramways is a necessity of the day; but the question this naturally gives rise to is by whom should they be laid, and in what part of the roadway should they be placed? For my own part I consider the laying of tramways by companies or individuals to be highly objectionable, as, if laid at all, they should be for the general public good, and laid at the joint cost of those who have at present to make the roads and those who use the ways. How, then, can this be done? We must have an efficient system, which can be used as public property, without causing inconvenience to those who do not use the ways, and we must devise a means of obtaining payment from the users. Now, amongst your references to the novelties exhibited at the Paris Exhibition I noticed that in the American Department Mr. Z. Eastman, the United States Consul at Bristol, showed an arrangement of tramway that could be utilised by the majority of carriages using the road. The invention has since been offered, I think, gratuitously to the public, so that it might be at once adopted without expense, except for the actual cost of the iron and laying.

The rails designed by Mr. Eastman are, taking the description of your correspondent, slightly grooved, and furnished with notches along the side, to prevent the possibility of slipping, and are to be laid slightly below the level of the pavement. The rails are narrower than the width of the horse's feet, and the feet will not slide on the rail, as it is not likely that the foot can strike upon the rail in any part where the notched edges will not hold it. The running surface is only slightly concave, so that although no difficulty will be experienced in keeping the wheel upon the rail, no facility is offered for the accumulation of dirt or other obstructions; and as the rail is provided with a flange or stiffener on the under side, great strength is obtained without unnecessary weight. The rail is, in fact, a T-iron, with concave top and notched sides—the inventor believes that cast-iron may in many instances be used, but upon this point he will probably change his opinion, the form of rail being so simple that the difference of price would be comparatively unimportant. In adopting Mr. Eastman's invention, it is not necessary that any change whatever should be made in the paving, if change be objected to; but he suggests that by the use of longitudinal stringers or sleepers, and the filling in with wedge-shaped blocks, so as in a measure to present the form of an arch, the paving can be made much stronger and more durable than ordinary. The great weight of vehicles will be upon the rails, and they furnish a broad supporting basis, so that the general surface will have no tendency to sink in spots, as at present. The carriages specially constructed to run upon these rails will be provided with wheels having convex rims of smaller circle than the concave of the rail, which makes a small bearing point of the metal to sustain the weight of the carriage, and, therefore, the wheels run with little friction. With this form of wheel there is no tendency to leave the rail accidentally, yet it is easy to pull out, if required, to pass another vehicle going at a lower speed. There are no flanges used, and as the wheel axles are cranked, the centre of gravity is as low as possible, and by a peculiar mode of constructing the axles, the hind wheels always run over precisely the same spot as the front wheels have traversed. These radiating axles enable the shortest curves to be turned without friction.

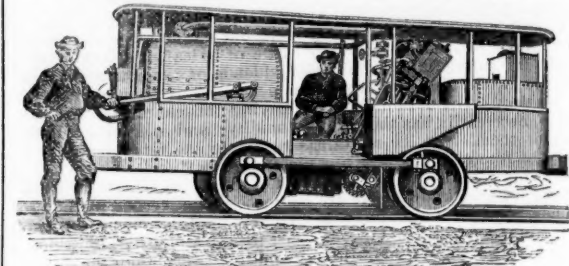
From this description it would seem that anyone possessing a vehicle could at a small expense have it adapted to suit the trains, and thus be enabled to do the same amount of work on the rails with one-tenth part of the strain upon his cattle, whilst those who decline to use the improvement could continue to use the road, as at present. It only remains then, to devise a means for meeting the cost of laying the rails and keeping the ways in order. The large number of new main streets now making in London would permit of the improvement being carried out at a minimum outlay, and with maximum advantage. A double line of tramways along the centre of the road from the Marble Arch, by way of Oxford-street and the Holborn Viaduct, to the General Post Office, with a branch from Hatton-garden, by way of the new street, past the Dead Meat Market, and a second double

line from Paddington to the Elephant and Castle, by way of the Marylebone, Euston, Farringdon, and Blackfriars roads, with a branch through Southwark-street to Dockhead and Tooley-street, and another along the Embankment to Westminster, would wonderfully relieve the traffic, and cost comparatively little—certainly not more than the laying of the ordinary paving for the same distance. The cost might be provided by the Board of Works and the City respectively—each being repaid the outlay by a nominal tax of 2s. 6d. per wheel upon every carriage of a gauge corresponding with the gauge of the tramway. By this means the tax would be entirely voluntary, whilst a very important improvement would be secured to the public, at scarcely more than the cost of keeping the present roads in repair. It would be satisfactory to learn from Mr. Eastman, or some other engineer, the probable aggregate cost for the system proposed, or per mile, which would have to be provided for. CITIZEN.

UNDERGROUND LOCOMOTIVES.

SIR,—The great saving effected in the cost of transportation by the introduction of railroads was due principally to the fact that the work formerly done by animal power was then performed by machinery. The locomotive was the great economy; it is not, astonishing, therefore, that many attempts have been made to introduce it on our mine roads, though, for many reasons, its successful application has not been effected, to my knowledge, till recently? Some months ago, Mr. Thos. Phillips, mine agent of the Lehigh Coal and Navigation Company's Panther Creek Mines, proposed to the company to have a small locomotive, suitable for mine work, constructed, and, having had his proposition approved, he now has the credit of being the first in this country to use successfully the locomotive for underground work. The subject is worthy the attention of your readers; I need, therefore, make no apology for giving you some description of the machine, and a statement of the estimated saving effected by its introduction.

I beg to send you a stereoscopic view of the locomotive as it stands ready for work near the entrance of the mine. Its principal dimensions are—



Length over all, 12 feet; width, about 4 ft. 4 in.; height from rail to top of stack or roof, 6 ft.; weight, with coal and water, 11,000 lbs. It rests on four wheels, all drivers, about 2 ft. in diameter, about 5 ft. 6 in. apart, and running on a 3 ft. 6 in. gauge of track. It works with cog-gearing and two inclined cylinders. The wheels have "inside bearings." Weight of rails, 40 lbs. per yard; cost of engine, \$2800—say \$3000 at the mine; manufactured by Messrs. Grice and Long, of Philadelphia. The locomotive runs outside from a "coal breaker," about 2000 ft. to the mouth of what is known as "Tunnel, No. 5;" thence underground, partly in rock tunnel, and partly in a gangway driven in the coal, for a distance of about 5500 ft., or a total distance of 7500 feet. This tunnel has a sufficient grade to make the work of drawing the loaded wagons ("cars" in this part of the world) out about equal to that of drawing the light wagons in. These wagons have a capacity of 99 cubic feet, and yield about 2 tons of clean, "prepared," coal. The "train" is made up of from 15 to 20 wagons or cars; it requires 7 mules to draw a train. The power of the locomotive is from 15 to 20 cars, according to the state of the road; it draws them round a curve of 75 feet radius, and its maximum speed is 9 miles per hour, though it does not run at that rate in the mine. The coal is the hardest kind of anthracite, so there is no danger whatever of its catching fire from the engine.

The following comparison of the cost of underground conveyance by locomotive and by mules is based on a production of 600 tons of clean coal per day, a capacity the mine is equal to, though it has not yet attained it: it will require, therefore, the moving of 300 wagons of coal, and about 40 tons of slate, waste, &c., per day. To do this amount of work requires the distance of 7500 ft. to be divided into three relays; there are, consequently, three sidings for passing cars, three teams of seven mules each, and 60 cars on the road at a time. It requires 20 cars to be in the mine, and 20 outside—in all, 100 cars to do the work when mules are used. The wear of the road by the mules requires the constant labour of one man to keep it in repair. As the locomotive can make the trip in and out in 30 minutes, taking a train of 15 cars—there are but 15 wagons on the road, 15 in the mine, and 15 outside, or (say) 50 wagons suffice to do the same work as it requires 100 to accommodate when drawn by mules—a saving of 50 wagons, costing \$125 each, is effected. In this mine, owing to the high inclination (60° to 80°) of the seams, and their great thickness (20 to 50 ft.), one miner, with one labourer to load the coal, can cut 14 tons or seven wagons per day. This is more than can be done in other anthracite regions, where it is usual to count 10 tons per miner per day. It requires, therefore, 43 miners and 43 labourers (loaders); these men are conveyed to and from their work on wagons; there is a saving of 15 minutes each way in hauling these with the locomotive, or four days, at \$2 per day, saved in this item each day. Making a comparison of the working expenses of these two motive powers, we obtain the following figures:—

LOCOMOTIVE, PER DAY.		MULES, PER DAY.	
1 engineer	\$3.00	21 mules, at \$1	\$21.00
1 boy	1.75	3 drivers, at \$2.10	6.30
Repairs, oil, fuel, &c.	1.55	Extra cost, keeping road in repair ..	2.00
Total	\$6.30	Total	\$29.30
Balance in favour of locomotive, \$23.00.			
Or, adding saving in men's time, \$31.00 per day.			
In first cost we have—			
Locomotive	\$3,000.00	21 mules, at \$200.00	\$4,200.00
50 mine cars	6,250.00	100 mine cars	12,500.00
1 siding for engine	1,000.00	3 siding for passing wagons ..	3,000.00
Total	\$10,250.00	Total	\$19,700.00
Balance in favour of locomotive, \$9,450.00.			
Counting interest at 10 per cent. on first cost saved	\$945.00		
Saving of \$31.00 per day for 200 working days	6200.00		
Keep of 21 mules for 100 days (during winter), at 20 c. a day ..	420.00		

Making a grand total of

saved per year, or over 6 c. per ton on the coal taken out.

And this when we neglect such important items as wear and tear or sinking fund, which is very much heavier for mules than for the engine. We count that the greater cost of using 40-lb. rails, in place of those weighing 28 lbs. per yard is balanced by the greater durability of the former, and by the greater duration of the "ties," which are quickly worn out by the mules. We find, therefore, that the locomotive will pay for itself two and a-half times each year when it does the above amount of work—and its ability to do it has been abundantly proved.

The question of vitiating the air of the mine, or more particularly of the tunnel, has not escaped my attention; in fact, that is likely to be the most important question in its introduction into our anthracite mines. The tunnel in which the present engine is now working is well ventilated; there is also an upcast air-shaft to the surface, at the inner end of the gangway, and the engine stands under this when not running. As the wagons and engine nearly fill the section of the gangway, it follows that when running there is an "eddy" formed behind them, where the gas from the locomotive collects. After a certain time this becomes somewhat disagreeable to the breath, though by no means to such an extent as to be injurious in any perceptible degree to the health of the men. I examined the subject in person, and can speak with confidence; but in an ill-ventilated mine, where the engine is constantly on the road, this may become a consideration of the gravest importance.

This is the first instance where the mine locomotive has been successfully employed in our American mines, though I understand one has very recently been made for the bituminous mines near Pitts-

burgh, Pa. Its success has been so gratifying that the Lehigh Coal and Navigation Company propose having two or more built for a similar use. I should like to hear what the English miners have to say about it.—*Wilkes-Barre, Pa.*

PEAT FUEL MANUFACTURE.

SIR,—Your correspondent "F. R. D.," in his letter of Sept. 8, states that Mr. T. V. Lee, in the conclusion of his process, subjects the blocks, saturated with oils, to the influence of *surcharged steam*, of 400° or 500°, and that then a blast, I presume of air, is driven through the blocks of peat, "for restoring the cohesion and density," which had been previously disturbed by the heat and pressure mainly employed for the purpose of *fixing the hydrocarbons in every particle.* Now, is your correspondent quite sure that the blocks had been subjected to heat? In a work of 1829 it is said—"Mr. Watt found that the latent heat of steam is less when it is produced under a greater pressure, or in a more dense state; and greater when it is produced under a less pressure, or in a less dense state," and *escaping steam*, I believe, is cold in proportion to its being "surcharged." Perhaps your correspondent will be so good as to tell us what high-pressure steam is surcharged with to produce the cold, it being, unquestionably, highly important that we should see our way a little more clearly than we do in these matters, there being, in this operation, much loss of labour, which we can ill afford. The "pressure" of the steam, although at 500° in the boiler, ceases immediately the steam escapes; and if the heat, the only agent left, have the property of fixing the hydrocarbons in every particle, it should likewise give, and not take away, cohesion and density.—*Sept. 16.*

HOME ENTERPRISE—OUR MINERAL WEALTH.

SIR,—I respectfully request as a favour your insertion of the following in your columns. To my mind, our nation at present resembles a flock of sheep, as the mere rustle of a leaf, in the shape of a slight fall in the funds or railway dividends, or a rumour of war, &c., startles it, but this timidity, I am persuaded, is to a large extent groundless. The nation, however, having this characteristic of the sheep, necessarily has the other—stupidity; and so, as opportunities present themselves, its capitalists rush into the very hazardous regions of foreign loans.

Foreign countries have been quick to discern this state of things among us, and, knowing we are burdened with a perfect plethora of money, consider it a capital time to relieve us of our superfluity; and how well they have so far succeeded we all know, but, like blood-letting, I fear the remedy will be found to be worse than the disease. My earnest advice to the capitalists of this country is in every legitimate way to promote home enterprise, instead of entrusting their money for foreign purposes, to be applied they know not how, and my honest conviction is, were they thus to act, they would derive advantages much more satisfactory than they can possibly do from foreign investments.

A few years back I was over a considerable part of the South of Ireland, and there saw thousands of acres of rich virgin soil, which would yield the most satisfactory returns were the requisite capital and skill brought to bear upon it, but which was almost wholly neglected, and I believe is so up to the present time. Doubtless in other parts of that country the same thing holds. In the same region—the South of Ireland—I was over a large tract of copper and slate property, all on the seaboard, and of the most promising character, as I ascertained from not a little investigation, but, like the land I have referred to, totally neglected. Then, coming to England, I have frequently been over all the country, from Keswick on the north and Barrow-in-Furness on the south, in the way of business, and had every proof of its being full of minerals, in the shape of lead, copper, and ironstone; but, as regards the two first, it might as well, to a great extent, not exist, though I am persuaded it will yet be a busy hive of mining industry. Further, about six weeks ago I travelled through the island of Islay, on the western shores of Scotland, and there witnessed extensive and profitable operations going on in lead mining; and there being about 36 square miles of mineral property there, chiefly lead, there is ample room for many more mines being developed, and I believe this is highly worthy of the attention of capitalists.

For some time past there has been a cry that the mineral wealth of Cornwall and Devon is about exhausted, and that we must now look exclusively to foreign countries for the needed supply. I neither believe the one nor the other; but, supposing the former were true, there is no need for capitalists rushing to foreign countries in search of minerals when such localities as I have named exist, and many such, I believe, do exist in our own country.

Besides, from all I have been able to gather, for one foreign mine that pays, six will be found in our own country which pay. There is, therefore, every reason, in my judgment, why the capitalists of this country should stimulate home instead of foreign enterprise, not only as regards mining, but other branches of our industry; and, seeing the continued and almost universal stagnation in business, which is subjecting vast multitudes in our country to great privations, those capitalists would be regarded as benefactors who would come boldly forward and endeavour to take the lead in renewing and reviving legitimate home enterprise.

OBSERVER.

THE PROGRESS OF MINING—AS A SCIENCE, AND SOURCE OF COMMERCIAL WEALTH.

SIR,—The weather is delightful in these parts; the valleys full of sunshine, and on the hills the air most healthy. A ramble amongst the Welsh mountains is the most invigorating occupation I can conceive. However philosophers may tell us that air consists of the same quantities of oxygen and nitrogen in every situation, I cannot divest myself of the feeling that there must be a great deal more of the life-giving principle in the atmosphere on these leviathan crests than in the dusty streets of London, or any other crowded town. And, then, the water is so fresh, so pure, and so crystalline, that in drinking it you seem to be swallowing frozen ether.

Hearing that a trial had been undertaken, on the top of the Darren hills, upon purely scientific principles, without any indications of lodes on the surface, for the discovery of the junction of the Great Darren and Cwysymlog lodes, to the west of those mines, I, accompanied by some friends, took a stroll up these ridges, for the purpose of examining the progress made, and the effects of the work. It seems that, knowing these lodes approached each other from Darren Mine, at an angle of 130°, some agents had dialled the ground, and laid out a shaft. This shaft, when we saw it, was from 5 to 6 fms. deep, and in the heads of ground, which were cemented together by spar, stars of lead ore are distinctly visible. In one instance a small piece of solid lead, of the size of a hazel nut, was found formed in one of the crevices. They call this mine the Junction Mine here, it being at the meeting of two of the richest silver veins in the country. The work done in the old hillocks and shafts, according to the present yield of silver, bears evidence that from first to last not less than 500 to 600 tons of pure silver have been sent away from the Darren and Cwysymlog Mines. Most likely I am far under the real quantity in estimating it at this amount.

From this point we rode away over the Great Darren and Cwysymlog Mines, the site of the operations of Sir Humphrey Mackworth, Mr. Bushell, and Sir Thomas Bonall, and the places to which that "connyng" workman, Christopher Schuts, directed his attention by order of our mighty virgin Queen Elizabeth. For two miles we continued our route, over heaps of waste mounds, that indicated the positions of the cottages and gardens of a bygone race, situations where the water-wheel of antiquity has given way to the lordly steam-engine, which with its strong arm lifts the water with the greatest ease for working 100 fms. deep, which in the days alluded to—say, 250 years ago—must have been attended with infinite difficulty in keeping the works clear of water at 20 fms. under the adit. These immense hillocks are now covered with splendid modern water machinery, in addition to the steam-power, beautiful drawing machines, pumping and crushing machinery, capable of reducing scores of tons of rock per day to the finest description of sand and slime. In fact, although hundreds of years have elapsed since those great mines were the scene of the busiest occupations of the human family, they are still as thickly populated as ant-hills.

Towards the close of the day we found ourselves travelling through

Bwlch Consols, homeward bound; but it was not destined that we should finish our occupation thus. A good Providence had determined otherwise, for Capt. Northey, the manager of Bwlch Consols, saw us—and with him to see was only another word for placing his hospitality before us, which at that time, after so long a ramble, was not unwelcome; and although we, with our usual modesty, at first rather seemed to hesitate, all resistance was unavailing. Besides, I had to thank Capt. Northey for an act of courtesy manifested to myself and some great miners who came up a few days before.

But I must confine myself to the spirit of the subject of this epistle—the Progress of Mining; which I shall attempt to do under the head of Ore Dressing. It seems that Capt. Northey has for some time conceived the idea of doing all his dressing by machinery, and, as usual, we found the girls in alarm, fearing their occupation would be gone. As this is a matter of great practical importance to mining, I will try to describe the means provided in these mines for doing away with hand-labour. It is obvious that if all the operations of lead ore dressing could be performed by machinery a great saving in cost would ensue. Captain Northey commences his revolution in dressing at its delivery from the crushing rollers. In the old practice the lead ore fell into the cover or head of a long buddle, and on being stirred about by means of a shovel, the fine ore settled on the bed of the long buddle, and the coarse was shovelled up for jiggling. Instead of this, Captain Northey has substituted a round receiver, like a tub, agitated by iron arms, revolving in it horizontally. The motive-power is a water-wheel at the bottom of the flooring, which dominates, by means of skilfully combined appliances, every operation on the floors, and that almost by the slightest touch of the hand. At the foot of the agitator there is a receptacle, in which four shovels revolve perpendicularly on arms fixed on an axle, which raise up the coarser ore, and drop it on a screen through which any fine ore might pass, while the rougher is delivered to be jigged by machinery; but the great body of the fine ore passes on to a series of beautifully arranged round buddles. These are splendid machines. The centres, for about 8 ft. diameter, are raised about 18 in. above the surrounding plain. The ore is distributed over the centres by means of revolving iron shoots, and the second part of the buddle, into which the ore falls, is a continuous or circular inclined plane, calculated to effect the work of the old flat buddle, but in a more complete manner. The inclined plane is surrounded by a foss, or drain, with a fall so arranged that the waste passes off by specific gravity. If the whole arrangements answer the purpose, Captain Northey calculates to dress 20 tons of ore, or 300L, worth of produce, more monthly in future, for the same dressing cost. The fear of the dressing girls being out of work is groundless, as there will be plenty of work for them in separating inferior ores for the crusher, an operation that will prove a new source of profit to the company. I found, through the courtesy of the manager, that there are great reserves of ore thrown open underground in this mine, that cannot be exhausted for years to come, thus stamping the affairs of the mine with an impression of solidity and permanency not often found in mining.

M. F.

GOLD IN NATAL.

SIR,—In last week's Journal you allude to a report issued by us upon a small piece of quartz containing native gold, and say—"That the quantity—namely, 1185 ozs.—is probably an error, arising either from the omission of the decimal point, or from the small quantity of the quartz tested." In reply to the first suggestion, we beg to say the small piece operated upon did give a product of gold equal to 1185 ozs. in the ton; and to the second, that no error arose from the smallness of the piece sent, so far as the report was concerned, although, of course, it only indicated the contents of the piece we received, which weighed, as you state, only 65 grs.

JOHNSON AND SONS.

P.S.—Our report was "equal to—gold, 1185 ozs.; silver, 60 ozs., in the ton of 20 cwt."

RECENT NEW ZEALAND GOLD DISCOVERIES—No. III.

SIR,—The quartz leaders are found cropping out of almost every principal elevation; they differ in thickness from 6 to 7 inches to as many feet, and dip at an angle of 47° north-east and south-west, and it is believed that the reef will improve in value in depth. The leaders are visible from the beach of the Hauraki, springing, as it were, out of the water, whence many infer that the great mass itself of auriferous rock lies beyond the reach of the miner, who is, therefore, restricted to the mere offshoots of it. Time and science will soon determine this matter. The thicker quartz leaders are exceedingly tough, and only to be moved by blasting, but the lesser ones are easily worked. As a rule, they are rotten, being cased over with a kind of pipe-clay, which is also auriferous. The bulk of the gold, however, is obtained from the denser rock. This, as a Californian would say, is "thoroughly seasoned and spiced with yellow grains." In Hunt's or the great claim, which I alluded to in No. II. of my letters, the rock is literally one mass of sparkling gold. I have seen other specimens of auriferous quartz, in which not a single particle of the precious metal could be detected by the naked eye, and yet when submitted to the crushing and amalgamating mills, on the spot, they have yielded 11 ozs. per ton. Until they have carried their stuff to the mills, many of the diggers can form no notion whatever of the value of their claims. Weeks and sometimes months elapse before they can test their luck.

The forfeiture of the licensed claim of any miner by its being left idle, as you may readily conceive, is a prolific source of controversy, and sometimes of bloodshed, especially in those localities where the gold has been "touched," or in the richer portion of the field. As I have given you the particular description of the country in my first letter, which appearance, as I before remarked, is very peculiar, and the composition of the hills equally so—in fact, altogether unlike the rugged land in other parts of the province, or in Taranaki—so much, then, for the Thames gold fields. So far as the climate of the northern island of New Zealand is concerned, I may venture, without any disparagement to gold fields in other parts of the world, to say that its influence to Europeans is extremely beneficial, and particularly so to Englishmen, who would find themselves on landing at the Antipodes better in health, and very soon vastly better in pocket. Provisions of every kind are cheaper than at other gold fields, arising from the fact that the water carriage is easy, and no great distances have to be traversed on land. In my next I trust to give a few more particulars of this healthy gold-bearing region. J. E. SMITH, Her Majesty's Civil Service.

YUDANAMUTANA COPPER MINING COMPANY OF SOUTH AUSTRALIA.

SIR,—As shareholders, we are greatly indebted to you for the lucid and satisfactory manner in which you have so fully pointed out and explained the real value and importance of the intelligence received from our mines by the last Australian mail. We are the more indebted, because there has appeared in some of our contemporaries several communications full of the veriest nonsense that could be penned, and at the same time utterly opposed to fact. The experienced observer can easily detect the aim of the writers of these anonymous effusions, even if the cloven hoof had not so clumsily obtruded itself, and with equal facility can there be traced in the meaningless invectives the perpetuation of that vicious system with which this company has been attacked from the time of its inception. The representative, so to speak, of the depreciatory howl, has for some years found it to his advantage—judging from his pertinacity, to say nothing of his assumed assurance—to attend each six-monthly meeting, to publish numberless circulars, and to circulate them among the proprietors, albeit he holds but five shares in the company! The truthfulness of his assertions may best be judged by the fact that he felicitously informed us upon more than one occasion that we "really had no property;" but as soon as that statement became so "gloriously absurd" that even this representative could no longer put it forward, another equally absurd statement was published, to the effect that, admitting the company did "really possess a copper-producing property," it would prove to be commercially valueless, inasmuch as there was not wood enough in the neighbourhood "to make a box of lucifer-matches," which statement we were assured was made "upon the most reliable testimony by persons who live in the locality of the property." This point is fully and completely cleared up by the fact that furnaces have been and are still being erected, and that smelting operations are being rapidly increased; for, as you pointed out in last week's Journal upon the authority of the superintendent at the mines, "there is no prospect for the present of any diminution in the supply of firewood for smelting purposes, a tract of country, well wooded with suitable timber for smelting, about 2 miles wide, and 8 to 10 miles long, having been found about 15 miles distant from the mine."

As soon as the hard, immovable fact was proved that there was sufficient firewood "to make lucifer-matches," the reply, and the only one that could be made, was—"Yes; but your timber will soon be consumed, and what will you do then?" Was he to be reminded, was he to be told, that the answer before he was given, existed within short remove from the mine such a large tract of wooded country. But let us see how this prophetic knowledge, with reference to the rapid exhaustion

of the timber, gained "from the most reliable testimony of persons who live in the locality of the property," was met by one of the directors at the general meeting, held last November. "It was true," he said, "that unless more timber were discovered, some difficulty might arise in future years, but there need be no anxiety upon that point, inasmuch as a Bill had been laid before both Houses of Assembly, authorising the construction of a railway for 200 miles north of Port Augusta, which would go within 10 miles of the Yudanamutana Mine." It was further stated that "this railway would, in all probability, be completed many years before the firewood became exhausted."

How was this conclusive fact received by the undaunted representative of the "bears?" In this wise—"That he could inform shareholders of something they did not know, the truth of which they might ascertain by calling upon Mr. Dutton (the agent for South Australia). What did Mr. Dutton say?—Why, that nothing so gloriously absurd could be mooted as this railway." This, naturally enough, came to the ears of Mr. Dutton, who immediately communicated with the directors, and informed them that "he (Mr. Dutton) had made no such statement as that imputed to him." And that the matter is not quite so "gloriously absurd" as some people would have us believe is shown by the circumstance that the Bill has not only passed, but that the railway has been commenced.

The material question, however, which just now seems to be disturbing the equanimity of the operators in the shares, is as to the source of the now famous telegram, announcing the discovery of "a seam of ore richer than the Burra Burra." Now, whether this telegram be a forgery or not is to my mind a matter relatively unimportant, since we have received the intelligence from our superintendent that a "new and important discovery" has been made, that in one part of the mine "there is a lode of 4 to 5 ft. wide, of not less than 35 per cent., the floor being as solid as an anvil," which, as you explained last week, must be worth something like 250L per fm.; and that in another part, where the "new and important discovery" has been made, there is "a splendid lode of ore, 7 to 8 ft. wide—one of the best lodes in the mine," which, as you also explained, must be worth 350L per fm. We are further informed that "the mine is improving the deeper they go, and may now safely take its rank as a permanent mine."

The point, therefore, for bona fide shareholders to ascertain is—not whether Mr. Fivesh did or did not send this telegram, but whether the Burra Burra did ever prosper, even in its palmiest days, a "seam of ore" of such value as that now being worked at Yudanamutana. If it did not—and no one is better informed upon the subject than Mr. Paxton—the telegraphic announcement is literally true.

CITY, Sept. 14. ONE WHO IS NOT A "BEAR" OF 1000 SHARES.

MINING IN NEVADA, U.S.

SIR,—By inserting a few lines in your valuable Journal from this part of the globe, I think you will be conferring a great favour to the public in general. For the past four years we have been in a country abounding with gold, silver, and other precious ores, but labouring under great disadvantages, owing chiefly from want of capital to develop them, and there being hitherto very little inducement for capitalists to visit our untold wealth, owing to the roughness of the country they have had to travel over; but with the Great Central Pacific Railroad entering the borders of our country, and in three weeks will pass through its richest portion, I may now say there is no better investment for English capital and opportunity for shareholders than that presented by the mines of Humboldt. I was employed eleven years in mining in England, and have had fourteen years' experience in different parts of the world. I prospected this country with Capt. Barrett, of Cornwall, who was sent out by English companies, but owing to the great quantity of snow and the hostile Indians we could not prospect to much advantage; since then we have partially civilised the plains, and I have prospected the country thoroughly; and, from careful examinations, my candid opinion is that there are ledges enough to employ 10,000 miners, and if worked properly and advantageously would pay dividends in from six to twelve months after the work has commenced. Now, with the railroad in our midst, our mines can be worked more economically, bullion transported cheaper, and wages reduced, owing to living being 50 per cent. cheaper. There are a few New York companies working here, but as a general rule New Yorkers are ignorant of practical mining. They prefer stock-exchange or telegraph operator to superintending the mine, so their mines are worked by men who never saw a mine, and there can be little prospect of success. There are a few industrious Cornishmen here, men without capital, but with muscle, skill, energy, and practical knowledge, who are on the eve of great success. All we want is capital and experience; and I venture to say that before long Humboldt will be as rich a mining county as the world can produce.

Humboldt County, Nevada State, North America.

JOSEPH ORGAN.

FOREIGN MINING AND METALLURGY.

The coal extraction of the department of the Nord amounted in 1867 to 2,377,389 tons, as compared with 2,246,657 tons in 1866, giving an increase last year of 130,732 tons. This increase is less than that which took place in 1866 over 1865 (280,112 tons), but, at the same time, it is a continued progress, rendered all the more remarkable by the fact that neighbouring basins have not realised such an advance. Thus, the coal basin of the Pas-de-Calais, notwithstanding the skill with which mining operations in it are generally directed, only produced 1,609,664 tons in 1867, as compared with 1,608,574 tons in 1866, showing a falling off in 1867 of 28,910 tons. If, as regards the department of the Nord, we examine the extraction of each of the companies per se we find that in 1867 the Anzin Company increased its extraction to the extent of 155,237 tons as compared with 1866, or more than the increase in the production of the entire basin of the Nord last year. The number of men engaged in the mines of the Nord last year was—below ground, 12,859; and on the surface, 3036; making a total of 15,895. The report of M. Cacarier, the engineer-in-chief of the mines of the Loire, to the general council of that department, indicates an increase of production in the sub-arrondissement of St. Etienne; 23 concessions in activity gave an excess in 1866 of 129,464 tons of coal of various quality. The working of coal in the sub-arrondissement of Rive-de-Gier is maintained at about 600,000 tons per annum. This result may be considered satisfactory, when we remember that the working of the Rive-de-Gier basin, dating back for more than a century, has exhausted the greater part of its beds. Active explorations have been made by various courageous and persevering companies in order to come to an extension of the Rive-de-Gier bed; and it is to be met with it, except at a great depth. Orders for iron continue to arrive at the French works; several orders have, indeed, had to be refused, from the want of sufficient time in which to execute them. The general state of the French metallurgical markets may be said, then, to improve; at the same time, prices have only very slightly revived, although some special articles have been advanced 5 per cent. during the last fortnight. The foundries of the Champagne group have a good current of work, as well as the establishments which occupy themselves specially with railway plant. In the Moselle the state of affairs remains good, but there is no change to notice in the tone of prices. Refining pig does not give rise to many affairs; nevertheless, many producers have engagements for their current fabrication; prices remain at 27. 8s. 10d. to 27. 9s. 8d. per ton, but a slight improvement is looked for, and seems likely to be the consequence of the advance that has taken place of late in the price of this group. The production of the forges of the department of the Seine-Inférieure was estimated last year at 880 tons; and the foundries, 20 in number, produced, in 1867, 8320 tons of castings. The other metallurgical works of the department deal with copper, zinc, and lead, and are of rather considerable importance. The production in 1867 of copper and brass, rolled and in tubes, amounted to 5230 tons; of rolled zinc, to 2650 tons; and of lead, rolled and in pipes, to 3635 tons. In the Haute-Vienne the second fusion foundries and the works for the construction of machinery were carried on, it is complained, with but little profit in 1867; but they, nevertheless, nearly all maintained their staffs last year without alteration.

The Belgian coal trade appears to be improving from day to day. The deliveries by water have regained a certain activity, which has enabled some impression to be made on the stocks of coal accumulated on almost all the pits' mouths. The extraction has increased, even in the basin of the Couchant de Mons, with the exception of some pits which still remain inactive; prices, nevertheless, do not exhibit any improvement. The Belgian General Railways Working Company has given some explanations in response to complaints made by coalowners of the Hainaut on the subject of the want of plant on the lines of that company. The General Working Company possess, it appears, 4800 goods trucks, of which 1400 have been supplied to it during the past year or so. The Belgian State Railways system possesses 10,000 trucks, and its annual traffic is 6,700,000 tons, the *parcours* of which is relatively considerable, while the traffic of the Belgian Railways Working Company scarcely exceeds 3,000,000 tons annually, the average distance over which each ton is carried being sensibly less. The stock of plant of the Belgian Railways Working Company is, then, affirmed to be sufficient. There is no material change to report in the Belgian metallurgical markets; some orders for iron have been placed, and plates continue to arrive at the works, but affairs have not yet reached that *clan* which distinguishes all complete and thorough revivals of activity, and great operations continue to make default. An order has been expected for some time, but has not yet been secured, for 85 locomotives and 2000 trucks, to be furnished to the Great Russian Railway Company, to meet the wants of the Nicholas (St. Petersburg and Moscow) line. The Great Russian Company has, it will be remembered, assumed the working of the Nicholas line, which belongs to the State, and which has hitherto been worked by the Russian Government itself. When the Great Russian Company proposed, it is stated, to treat with a Belgian contractor for the supply of this supplementary plant, which was imperatively required to enable the company to carry the great quantity of goods accumulated on the platforms of the Nicholas line, Mr. Wynans, an American, came forward and contended that he was holder of a contract concluded with the Russian Government, by the terms of which he had a monopoly of the supply of all the plant required for the working of the recently-transferred line. Pending the settlement of this dispute with Mr. Wynans, whose terms, as was to be expected, were much higher than those at which the plant could have been supplied in Belgium, the Great Russian Company has been obliged to withhold the order from general competition. At an adjudication of rails and cramps for the Belgian State Railways, the first lot, which comprised 3250 tons of Vignoles rails, with fish-plates and bolts, was let to the John Cockerill Company, at Seraing, at 67. 16s. per ton. The second lot, 150 tons of cramps, was let to the State, and which had hitherto been worked by the Russian Government. The Liege Royal Arms Manufactory is now delivering muskets made at Seraing of Bessemer steel of a quality specially adapted for arms, and produced under the name of "Cockerill Steel."

As regards miscellaneous matters, we may note that the French Transatlantic Steam Navigation Company has concluded a contract with the company owning the concern known as the Chantiers et Ateliers de l'Océan for the construction of three steamers, intended to be placed on a new line to Valparaiso. The Charleroi Association of Forge-masters has addressed to the Chamber of Commerce of that arrondissement a long report on difficulties alleged to have been occasioned to metallurgical industry by a tariff introduced on the Belgian State Railways Feb. 1, 1868, and by modifications introduced too frequently in the conventions regulating the relations of the different railways with each other. The revenue of the Parisian Company for Lighting and Heating by Gas declined in July to the extent of 9.76 per cent., as compared with July, 1867; for the first seven months of this

From Messrs. WARD and JACKMAN:—After such a long period of depression it is gratifying to observe that there is a decided improvement in the London Mining Market.—In fact, a reaction for the better has set in, and we trust it may prove lasting and beneficial. The improvements at several mines mentioned by us in last week's letter, we are pleased to state, continue, and others have this week to be added; thus whilst the stock markets have been characterized by a degree of agitation, which bears testimony to the state of tension that now prevails throughout Europe, impairing confidence and checking operations elsewhere, mine produce are an exception, and are not influenced, as other securities are, by the effects of the war. The supplies delivered by the mines of Russia, or events political, which often suffice to cause a depreciation of millions sterling in the market value of many European Investments.—WHELAN & EMILY HENRIETTA: The 70, cast of shaft, is worth 25*l.* per fm., with a fine appearance. A winze in the bottom of the 60, about 5 fms. In advance of the 70, is worth 35*l.* per fm. At EAST GRENVILLE the pitch in the back of the 110 has advanced 10*l.* since our last report. The 90 is now open, and is producing 10 tons per fm. Looking below the 75 the lode is worth for the length of the winze from 6 to 8 tons per fm. The engine at TAMAR VALLEY MINE will go to work on or about the 26th. The agent, Capt. Goldsworthy, is very sanguine of making profits when the mine is in fork. We last week mentioned EAST CARADON, WEST CARADON, PROVIDENCE, and TINCROFT as mines selling at low prices, and likely to improve; we have no reason to alter our favourable opinion we think they will, and will add to them WEST DRAKE, WALTON'S MILLS, and EMILY HENRIETTA. We beg to direct the attention of our clients to our advertisement in the front page.

FOREIGN MINES.

ST. JOHN DEL REY.—Morro Velho, August 17: Morro Velho produce for July, 9231 oits., from 2048 tons of ore, yield 1826 oits. per ton; Morro Velho cost for July, 6374;—loss for July, 1808; Morro Velho produce for 11 days of August, 2147 oits., yield 1228 oits. per ton; Gala produce for July, 2089 oits., from 841 tons of ore, yield 2484 oits. per ton; Gala cost for July, 4557; Gala profit for July, 4381; Gala produce for 11 days of August, 635 oits., yield 2082 oits.

DON PEDRO.—Mr. F. S. Symons reports: The produce for July amounts to 15,115 oits. (equal to 170 ozs. troy) gold, at 64s. 6d. per oit., 6429l.; cost, 2107l.; profit, 4321l. The box work has been taken out, but the general body of lode has yielded remarkably well, rarely better, and so long as this maintains so high a standard rich deposits may at any time be encountered.—First division of August: Extract of Mr. F. S. Symons's letter of Aug. 18:—Produce cleaned up to date amounts to 44:8 oits. The features continue good and promising, though no box work has been taken out since my last. The No. 5 lode, at horizon of wine sunk on it from Alice's, has proved to be of most satisfactory dimensions, being 50 ft. wide, and on an average 7 ft. in height, all more or less auriferous, and in some places rich—a most satisfactory feature, as this increases greatly our reserve of lode above water level.

ROSSA GRANDE.—Mr. Ernest Hilleke reports:—The produce for July amounts to 1577 oits.—158 ozs. troy. The operations are proceeding with vigour, and the mine has improved greatly since my last. The lode in the shaft and level is looking well; it is from 4 to 6 ft. wide of solid ore, and to all appearances will continue so. The improvement in the auriferous quality of the stone is very encouraging. During the latter part of the month, from the 20th to the 21st inst., 72 tons of ore have been extracted from the above-mentioned points, and gave the very satisfactory result of 729 oits.; this exceeds 10 oits. per ton. The lode in the stope of the old workings continues of a good size; the main portion of the 120 tons of ore which has been treated up to the 20th inst. has been derived from this stope, and equal to 54 oits. per ton. On the whole, therefore, the predictions are very promising.—First division of August: Extract from Mr. Ernest Hilleke's letter, dated Aug. 16:—The operations are progressing well. The lode has undergone no change since my last; it still looks encouraging, both in the level and shaft. We have commenced opening stope below and above the level east from shaft, and find a good sized lode at both places, particularly above the level; its size in some places is from 7 to 8 feet wide. Judging from the appearance of the skins in the stamps, the stone seems to continue equally as rich as it was the latter part of previous month.

ANGLO-BRAZILIAN.—Mr. F. S. Symons reports:—The gold return for July amounts to 3448 oits. (equal to 397 ozs. troy). Produce and Cost: Produce, 3448 oits., at 9s., 1561l.; cost, 1447l.; profit, 1014l.—General Remarks: The operations generally have proceeded uninterruptedly; good duty has been performed, and though the produce does not come up to our expectations, it exceeds that for last month, and enables us to show a profit of upwards of 1000. The works in the mine have been prosecuted vigorously, and the features of the lodes generally—Dawson's Canoe excepted—are encouraging. The arrastre for reducing sand escaping from the stamps to a greater degree of fineness was completed on the 15th, and is working admirably. From the produce extracted it is evident the second treatment of the sand is remunerative, and another arrastre will be erected forthwith.—First Division of August: Extract from Mr. F. S. Symons's letter, dated Aug. 18:—Since my last little or no change has taken place in the appearance of the lodes generally.

CHONTALES GOLD AND SILVER.—Consuelo Mine: No. 3 level, driving east from No. 2 shaft, on the course of the lode, has been driven 3 varas; the lode is 3 ft. wide, yielding but little gold at present, but the lode is looking favourable. We hope very soon to cut the ore that is coming down from the stope above; from the appearance of the lode in the stope the ore is dipping east. No. 1 stope, in back of No. 1 intermediate level, east of No. 2 shaft, has been stopped 18½ varas, the lode yielding 1 oz. of gold per ton. No. 2 stope, in back of the above level has been stopped 18 varas; the lode is 3 ft. wide, yielding 1 oz. of gold per ton. No. 1 stope, in back of No. 2 level, east of No. 2 shaft, has been stopped 21 varas; the lode is 3 ft. wide, yielding 1 oz. of gold per ton. No. 2 stope, in back of No. 2 level, east of No. 2 shaft, has been stopped 9½ varas; the lode is 3 ft. wide, yielding 1½ oz. of gold per ton. No. 3 stope, in back of No. 2 level, east of No. 2 shaft, has been stopped 3½ varas; the lode is 3½ ft. wide, yielding 1 oz. of gold per ton.—Estrella Mine: No. 4 level (deep adit), east of Consuelo river, has been driven 5 varas, to cut the lode, which is 2 or 3 varas further ahead, to drain the Consuelo old mine at 40 ft. deeper. The quartz from the back of this lode yields from 6 to 8 dwts. of gold per ton. Drilling this level will be a great advantage in working our mines, for which proving some new ground, and in this level and take the ore direct to the mill. More ground would have been excavated during the month had it not been for the heavy rains, which came through the mines in torrents, breaking down No. 2 old level, and stopping our ventilation; and in consequence of this I could not send so much gold by 60 or 70 ozs. to the mill. It is not merely the breaking down of 2 or 3 fms., but the stopping the ventilation. Every exertion has been used in getting an air-machine on top of No. 2 shaft, to force air through the mines. There are now 15 men working at this place, and in a few days we expect it will be completed.

San Domingo and San Antonio Mines: W. Evans: Stopping in back of No. 2 level, west of Palma's shaft, 24 varas; the lode is 3 ft. wide, yielding 8 dwts. of gold per ton. Stopping in back of No. 2 level, east of Palma's shaft, 17 varas; the lode is 4 ft. wide, yielding 10 dwts. of gold per ton. Stopping in back of No. 3 level, west of Palma's shaft, 3½ varas; the lode is 3 ft. wide, yielding 10 dwts. of gold per ton. Driving on course of San Antonio lode, west of Trinidad Creek, 12 varas; lode 2½ ft. wide, yielding 1 oz. of gold per ton; this lode is somewhat disordered, and appears to be dividing itself, forming a small bore, but from all appearance will soon come together again, and no doubt will prove more valuable. In consequence of the heavy rains during the month our tramway has required several repairs, Consuelo in particular, and a great deal of timber has given way in San Antonio Mine. A force of men is excavating for the foundation of new stamps, which will be excavated about the end of August, and ready for carpenters fixing their timber, of which several logs are already on the spot. Stamping during the month the stamps have been working on Consuelo ore solely, but in consequence of the damage to the tramway they have not been regularly supplied with ore, and from which cause the stamps could only work 18 days. The quantity of ore crushed during that time was 750 tons, producing 396 ozs. of gold. Six cups are being laid, and are preparing with dragstones, to be put to work as soon as sufficient quartz can be supplied. Mr. Beit adds:—I have already made great progress in preparing for 12 additional stamps at St. Domingo, and I think I may promise, notwithstanding the bad roads, to have them at work within two months after their arrival at San Ubaldo. I have got most of the timber required for them in, and have 12 men at work at the excavation for them. I shall only now state that what I have to lay before you will prove that all my statements with regard to large profits, as soon as sufficient stamps are erected, have been grounded on a solid basis. I have not time to go into all particulars about the mines, but everything is looking most flourishing. Advice has been received from the company's agent at Greytown that the first portion of the stamps had been dispatched up the river.

IMPERIAL SILVER QUARRIES.—Lewis Chalmers, Aug. 17: During last week 12 ft. of tunnel were completed.

RIENISH CONSOLS.—G. Sweet, Sept. 16: Christians: The drivages east and west in the 20 lachter level are without any noticeable alteration since last reported on. The drivage west, in the 10 lachter level, will afford 18 centers of lead ore per lachter. No alteration in the adit drivage west. The different stope are the same as last reported. The sinking of the engine-shaft is now being proceeded with.—Bilbach: The drivage west on the middle lode, in the adit level, is continuing to yield 1 ton of lead ore per lachter. A stope on this lode, in the roof of the 10 lachter level, will afford 25 centers of lead ore per lachter. The different tributary bargains are without change. In the cross-cut driving south in the 10 lachter level we have intersected a small branch of lead ore, and have commenced opening upon it; in my next report I hope to be able to report more fully on this point.—Madonna: The trial shaft in this mine is now about 4 lachters deep, and at the depth of 5 lachters we intend to cross-cut in the direction where we expect to find the lode.

RAILWAY COMMUNICATION BETWEEN PASSENGERS AND GUARDS.—In July an Act of Parliament was passed declaring that "after the 1st day of April, 1869, every railway company shall provide and maintain in good working order, in every train worked by it which carries passengers and travels more than 20 miles without stopping, such efficient means of communication between the passengers and the servants of the company in charge of the train as the Board of Trade may approve. If any company makes default in complying with this section, it shall be liable to a penalty not exceeding 100l. for each case of default. Any passenger who makes use of the said means of communication without reasonable and sufficient cause shall be liable for each offence to a penalty not exceeding 50l." To comply with this wise requirement a committee, representing the chief railway companies, has been sitting for some time at the War and Ordnance Office, London, to decide upon the best mode of effecting a means of communication between passengers, guards, and drivers while trains are in motion.

Among the numerous plans submitted is one patented by Messrs. KEARSELEY and HOLT, of Manchester, which promises to comply with the requirements of the Act of Parliament. It is on trial by the London and North-Western Railway Company on one of their carriages in London, and is also in successful operation on one of the carriages of the Manchester, Altrincham, and South Junction Railway. It was tested on the latter line on Friday, between Manchester and Knutsford, in the presence of Mr. Kirkman, the manager, and a number of persons interested in railway improvements. The result of the experiments, especially in the dark during the return journey, was quite satisfactory. At any moment the passengers could, and often did, pull down the small chain suspended over their heads in the carriage, and immediately hoist the semaphore from a vertical to a horizontal (or danger) position, thus causing it to show a red light, and at the same time set in motion the tongue of the alarm bell by the rapid revolutions of the wind vane, with its oscillating crank and lever; thus producing such a violent ringing, that not only drivers and guards, but all the passengers in the train of eight carriages, distinctly heard the sounds of alarm. The following description may enable our readers to form an idea of the nature of this valuable invention:—

The signal is placed upon the roof of each carriage. It consists of a circular iron frame or stand, containing a revolving wind vane, 12 in. diameter, which is set in motion by the air current caused by the speed of the train. To this stand a 12-in. brass bell is fixed; also a lamp showing a white light. A double semaphore, 15 in. diameter by 6 in. wide, is also attached, which, when in a vertical position, encloses the wind vane, thus keeping it at rest while the train is in motion. A light chain is connected to the semaphore, and passes along the carriage roof from end to end, and into each compartment, overhead, from door to door, being in such a convenient position that it may be used by any passenger, even in the dark, without leaving his seat. Should any passenger, owing to imminent peril, deem an alarm imperative, he has simply to pull the small chain overhead, when instantly the semaphore rises to a horizontal position, changing the white into a red light, and by uncovering the wind vane sets it revolving by the current of air, and rings the alarm bell incessantly until the train is stopped. That no one may tamper with the signal after an alarm has been given, a strong spring holds the semaphore up, which can only be released

by an officer of the company when the train stops. A white ball falls from the roof with the chain, a few inches, in the compartment from which the alarm has been given; the semaphore by day, and a red light in the night, direct the guard to the carriage, while the ball that has fallen from the roof points out the compartment whence the signal proceeds. The bell, lamp, wind vane, and semaphore, being all attached to one stand, render the signal exceedingly simple, portable, and easily fixed upon or removed from a carriage.

The patentees claim the following advantages for their invention:—1. Each carriage, acting independently, requires neither cords, chains, wires, tubes, rods, nor any other mechanical contrivance to connect the train from end to end.—2. No attention is required from the companies' servants at the various stations as to coupling and connecting when vehicles are added to or taken from trains in transit.—3. The semaphores, lights, revolving wind vane, and bells, acting both ways, require no special attention in the composition of a train, but are right for action notwithstanding the carriage may be reversed.—4. All the signals employed—semaphores, lamps, and bells, being well understood by the companies' servants, render working instructions unnecessary, and mistakes improbable.—5. The mode of working the signals, being similar to the working of railway signals in general, is a sufficient guarantee that they may, in all states of the weather, be safely depended upon for certainty of action when required.—6. No daily attention is required to keep the signal in good working order, and when the carriage is worn out the signal may be taken off and applied to a new carriage, being little the worse for wear.

EXPORTS OF RAILWAY IRON.—The exports of railway iron from the United Kingdom amounted in July to 37,516 tons, as compared with 66,101 tons in July, 1867, and 53,256 tons in July, 1866. The falling off observable in the exports in July was attributable to the diminished demand for British India. As regards the exports for the seven months ending July 31 this year, the total amounted to 331,058 tons, as compared with 318,028 tons in the first seven months of 1867, and 312,732 tons in the first seven months of 1866. The exports to Russia to July 31 this year declined to 28,100 tons, as compared with 48,432 tons in the corresponding period of 1867, and 38,261 tons in the corresponding period of 1866. To the United States, however, the shipments made amounted to 165,480 tons, as compared with 112,661 tons and 60,979 tons respectively. British India absorbed 51,026 tons in the first seven months of this year, as compared with 83,473 tons and 78,381 tons respectively. The value of the railway iron exported in July was 300,344l., as compared with 566,099l. in July, 1867, and 420,130l. in July, 1866; and for the seven months ending July 31 this year 2,614,606l., as compared with 2,662,380l. and 2,539,183l. respectively in the corresponding periods of 1867 and 1866.

THE SOUTH STAFFORDSHIRE COAL FIELD.—No. II.

This coal field, measured on Mr. JUKES's map, is 21 miles in length, and from east to west an average breadth of 5½ miles. Commencing on the north, at Breerton, the boundary line passes by Cannock, Wolverhampton, King's Swinford, Stourbridge, and Pedmore, eastward to Frankley, thence northward by Oldbury, West Bromwich, Aldridge, Brownhills, and Castle Hill to Breerton. Castle Hill is 900 ft. above the sea. The coal field is surrounded on all sides by the New Red Sandstone, or the Lower New Red Permian, mostly by the latter, except at Walsall, where the Upper Silurian measures are thrust up to the surface in an irregular patch of 3½ miles by 1½ mile, forming its eastern boundary in that distance. From Dudley to Parkfield the Silurian measures are also thrust up, forming an elevated ridge, and the eminences called Dudley Castle Hill, Wren's Nest Hill, and Sedgley Beacon; the latter 760 ft. above the sea. It is remarkable the absence of the Millstone grit, the carboniferous limestone, and the Old Red Sandstone; the South Staffordshire coal measures rest upon the Silurian beds. On the west side of this coal field Mr. JUKES's geological sections show the coal measures abutting against the Permian rocks at what is called the west boundary fault downthrow. No explorations have thrown any light on what exists below these Permian rocks; there is a probability that the coal measures may lie there, and the idea is entertained by some geologists that a continuous coal field may exist between South Staffordshire and Shropshire; in the latter the coal measures are from 1000 to 1100 ft. thick, agreeing with the depth in the southern portion of the South Staffordshire field. On the east side of the coal field the prospect is less hopeful; guided by Lord DARTMOUTH's sinking at the Heath Pits, West Bromwich, we arrive at the conclusion that coal is absent in that locality. The following section is given:—

Permian rock series	Yards	Feet
1.—Grey clunch, with streaks of coal	2	0 0
2.—ditto with batt	1	6
3.—Grey clunch	6	0 6
4.—Grey fire-clay, with ironstone	1	0 9
5.—Light greenish, grey, and red rock, containing a thin streak of coal	7	0 0
6.—Dark grey clunch and batt	1	6
7.—Dark coloured fire-clay	2	6
8.—COAL	0	6
9.—Grey fire-clay	0	2 0
10.—COAL	0	2 6
11.—Grey fire-clay rock	2	0 0
12.—COAL (lower part of Thick coal)	3	0 0
13.—Batt, gubbin stone, and table batt	0	2 0
14.—Grey clunch and lambedone	3	0 0
15.—COAL (supposed sulphur coal)	0	2 0
16.—White ironstone ground	1	1 0
17.—Grey fire-clay and ironstone	1	1 0
18.—Dark grey clunch & flattened concretions of ironstone	4	2 0 = 39 2 9

Total depth of Heath PitsYards 307 2 9
From this pit headings were driven in the 9 feet of coal to the east, about 35 yards; a pit sunk at the end of this, 27 yards, through fire-clay and sandstone; a boring was made below that, 60 yards, through "Bavin measures" (Silurian shale), so strong at the bottom that the boring was given up, and was supposed to be the limestone. Another bore-hole was put down to the north-east, with the same result. It would appear from these explorations that the coal measures are nearly nipped out on the east side, and the Permian and Silurian measures will ultimately come together. It should be observed that the working of coal was continued in the Heath Pits, in the 9-foot seam, to the west. Other explorations have been made through the Permian strata. Two pits were sunk by Messrs. DAVIS, at Bullock's Farm, near Spon-lane, through sandstone and marls of the Permian measures, 262 yards 2 feet, seam of coal 10 inches thick, 71 yards down, fire-clay below; this occurring in the Permian is unusual. Lord DARTMOUTH's pits, at Heath, had no coal or fire-clay in the Permian. At Lyng Colliery there was 183 yards 1 foot of red rocks, or Permian; at Lewisham pits 105 yards; and at the Terrace pits, close to the fault, 45 yards of Permian strata. On the southern edge of the coal field trial sinkings have been made. Mr. H. JOHNSON furnishes the following:—At Wassel-grove, near Hagley, a trial shaft has been sunk 262 yards, through the coal measures, and into the Silurian strata, at a cost of 12,000l.; no coal or ironstone of any value was met with. At the Manor Farm, near Hales Owen, a sinking has been made to the depth of 428 yards, at a cost of 13,000l.; a seam of coal, from 3 to 4 feet thick, was found, 310 yards down; headings were driven 300 or 400 yards in this, north and south, without any increased thickness of coal, and the trials are now stopped. This was done at a cost of 13,000l., by Mr. J. S. DAWES, on the property of Lord LYTTLETON.

There has been a discovery of coal at Madeley, in Shropshire, under the Permian. In South Staffordshire the Permian rocks are stated to be 500 yards thick; if this be correct, a sinking through them to the top of the coal measures, or whatever is next in order, would be a long and hazardous speculation; a boring would answer the purpose of proving the coal measures, at less cost. As this district is becoming exhausted in its supply of fuel and ore for iron making to a great extent, it is a subject of grave consideration how far money should be expended in trials on the western side of the coal field, as this would prove the thickness of the Permian strata, also the existence or not of the coal measures beneath. The existence of coal and ironstone at moderate depths would give fresh impulse to the district, and uphold its former prosperity.

The South Staffordshire coal measures are stated to be 1000 feet thick. The North Staffordshire ditto ditto 5000 ditto
The Shropshire ditto ditto 1000 to 1,100 feet thick.
The South Wales ditto ditto 7000 to 12,000 feet thick.

Over the greater part of the south side of the coal field the thick, or 10-yard, seam is found, in the districts of Bilston, Wednesbury, Oldbury, Halesowen, Brierley Hill, and King's Swinford; in the south-east corner, south of Rowley Regis, its quality is rather impaired, being much more mixed with cakes of sandstone, and interlaced with thin layers of it, making the coal commercially inferior, and difficult to keep clean. The thick coal under part of the Permian at West Bromwich is said to be 28 feet thick, with thin layers, or partings, in it. Beyond the area named the thick coal is supposed to divide

into several seams of workable coal to the northward, in a distance of about 5 miles, and from being 10 yards thick is gradually separated, until it is distributed amongst 300 ft. of shales and sandstone. These coals have been classified as follows in the respective districts:

SEAMS OF COAL FOUND SOUTH OF BILSTON.	SEAMS OF COAL FOUND AT ESSINGTON AND WYRLEY, BENTLEY, & PELSALL.
Upper sulphur coal, 1 foot, 100 yards above thick coal.	Essington third and fourth coals.
Brooch coal, 3 ft.	ditto fifth coal.
10 yard coal	ditto sixth coal.
	Wyrley Old Robin's coal.
	ditto yard coal.
	ditto Charles coal.
	ditto Cannel coal.
	ditto Brooch coal.
	ditto Benches coal.
	ditto 8 ft. or bottom coal, or Bentley Old Man's coal.
	Bentley Hey coal.
Heathen coal, 2 ft. 6 in.	Heathen coal.
Sulphur coal, 2 ft.	Sulphur coal.
New Mine coal, 7 ft. 6 in.	Pelsall yard coal.
Fire-clay coal, 7 ft.	ditto bass coal.
Bottom coal, 9 ft.	ditto cinder coal.
	ditto shallow coal.
	ditto deep coal.

SECTION OF COAL MEASURES AT BAREMOOR COLLIERY, THREE MILES SOUTH OF DUDLEY.	Yds. ft. in.
1.—Upper measures	149 1 4
2.—Two-foot coal	0 2 3
3.—Batt and coal mixed	1 0 0
4.—Brooch coal	0 2 6
5.—Brooch stone measures	1 1 10
6.—Herring coal	0 1 6
7.—Pins and penny earth	5 2 2
8.—Cannel coal	0 0 9
9.—Brown clunch	1 0 6
10.—Thick coal rock, consisting of rocky binds and peldon (dirty stone)	35 1 2
11.—Cat-head	0 1 6
12.—Black batt	1 0 4
13.—Thick coal, with partings	10 1 0
14.—Black batt	0 2 0
15.—Gubbin ironstone measures	3 1 6
16.—Heathen coal	1 0 5
17.—Parting	0 1 0
18.—Second Heathen coal	1 0 3
19.—Table batt	0 0 10
20.—White rock and peldon	5 0 0
21.—White ironstone measures	1 2 4
22.—Cake ironstone measures	1 0 0
Total	223 2 11

At the Baremoor New Pit the Thick coal was sunk through only 9 ft. thick at the depth of 138 yards 2 ft. 4 in. Continuing the above sections downwards, we have—

Sulphur coal.	Poor Robin's ironstone.
New Mine ironstone.	Bottom coal.
New Mine coal.	Gubbin and Batt's ironstone.
Fire-clay coal.	Blue flats ironstone.

Below this no coal or ironstone has been found of any value. At the Level Colliery, near Brierley Hill, Mr. B. GIBBONS sunk and bored 72 yards below the Bottom coal, in coal measures, rock and clunch, without any coal. At Bentley Limestone Pit, sunk through coal measures, bind and rock, no coal, 48 yards 2 feet; shales and limestone (Silurian strata), 132 yards=180 yards 2 feet, several other pits having been sunk through the coal measures near Tipton and Wolverhampton, varying from 70 feet to 146 feet of strata from the Bottom coal to the Upper Silurian shales, without finding any coal. Between Essington and Wyrley (where the upper seams are worked) and the eastern side of the coal field at Pelsall, no continuous workings have been made; but this space is said to be subject to disturbance from masses of trap rock. There is no reason to doubt that the seams now worked at Brownhills and Cannock Chase will be found by sinking further, below those now worked at Essington and Wyrley.

Royal School of Mines, Jermyn-street.

NOTICE.—ROYAL SCHOOL OF MINES.—JERMYN STREET, LONDON. The SESSION will BEGIN on MONDAY, the 5th of OCTOBER. Prospectuses may be had on application. TRENHAM REEKS, Registrar.

King's College, London.

LECTURES ON MINERALOGY AND GEOLOGY AT KING'S COLLEGE, LONDON, are given on Wednesday and Friday mornings, from Nine to Ten o'clock, by PROF. TENNANT, F.R.S. Those on MINERALOGY begin on the 9th October, and terminate at Christmas; fee, 2s. 2s. Those on GEOLOGY commence in January, and continue till June. A shorter course of LECTURES on MINERALOGY and GEOLOGY is delivered to Evening Classes, from Eight till Nine. These begin on the 18th October, and terminate at Easter; fee, 11s. 6d. Mr. TENNANT accompanies his students to the public museums and to places of geological interest in the country; he gives PRIVATE INSTRUCTION at 149, STRAND, W.C.

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Now in the Press, and will be issued in October next.

A MINING ATLAS, DESIGNED TO CONVEY COMPLETE INFORMATION CONCERNING THE CHIEF MINING DISTRICTS IN GREAT BRITAIN AND THE UNITED STATES OF AMERICA.

By THOMAS SPARGO, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

The work contains surface plans showing the geological formation of the various districts, and longitudinal and transverse sections of some of the most important mines in the United Kingdom, with observation upon their position, character, and working. Geological and parish maps of Cornwall, Devon, Cardiganshire, and the Isle of Man, showing height of hills, &c., have been prepared with the greatest care. Maps intended to illustrate the progress of mining in North America have been executed with great fulness and punctilious exactitude. A map of the United States and territories shows the divisions of each, with the mining districts of Nevada, Colorado, Idaho, New Mexico, Wisconsin, and the line of railways connecting the Atlantic and Pacific. Mr. Whitney, Commissioner for the Union to the Paris Exhibition, prepared a map of the great mining region of Colorado for the occasion, and has presented the plates to the author, for this work. A surface map of California shows the position of the mines in that great mining region.

The work will embrace explanatory notes, definitions, and illustrations of mining terms—such as shaft, level, cross-cut, sink, stope, end, rise, pitch, &c. The work will contain upwards of fifty maps, plans, and sections. Price, 10s.; by post, 10s. 6d.

THE VIEWS AND OPINIONS OF MR. RICHARD TREDINNICK, CONSULTING ENGINEER, ON BRITISH AND FOREIGN MINES AND MINING.

Will be published 1st October, 1868, price 10s. 6d., 8vo., 320 to 354 pages. Special Selection of Mines for Investment upon application for a fee of £1 is.

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WALES.	North Pool.	Grenville.
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In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.R.S., author of "Gleanings among Mines and Minerals," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the length and experience of Messrs. WATSON BROTHERS they are enabled to offer, thus publicly, their best services to all connected with mine or the market, as they have for so many years done privately, through the medium of their own Circular.

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MONDAY.—Good demand to-day for East Grenville, at 2½ to 3. Grenville, 27s. to 29s.; Prince of Wales, 36s. to 38s.; Great Retallack, 3½ to 3½; West Chiverton, 60½ to 61½; East Caradon, 2 to 2½; and Great Laxey, 18 to 19. Don Pedro are flatter, at 3 to 3½; Yudanamatana, 2½ to 3½; West Seton, 150 to 160.

TUESDAY.—Market rather dull. East Grenville, Grenville, Chiverton Moor, and Great Vor flatter. East Grenville, 2½ to 3; Grenville, 26s. to 28s.; Chiverton Moor, 60½ to 61½; Great Vor, 12 to 13; Prince of Wales, 36s. to 38s.; West Chiverton, 60½ to 61½; Don Pedro, 2½ to 3; Yudanamatana, 2½ to 3.

WEDNESDAY.—Settling day. Active demand for Prince of Wales, East Grenville, West Chiverton, Great Laxey, Marke Valley, and Yudanamatana. Prince of Wales, 38s. to 40s.; East Grenville, 2½ to 2½; West Chiverton, 60 to 62½; Great Laxey, 18 to 19; Marke Valley, 7½ to 7½; Chontales, 2½ to 2½; Yudanamatana, 2½ to 3; Don Pedro, 3 to 3½, ex div.

THURSDAY.—Good demand to-day for East Grenville, at 2½ to 2½; Prince of Wales, 38s. to 40s.; West Chiverton, 60½ to 61½; Great Laxey, 18½ to 19; Marke Valley, 7½ to 7½; Yudanamatana, 2½ to 3; West Drake Walls, 5s. to 7s. 6d.; Great Retallack, 3½ to 3½; Chontales, 2½ to 2½; Mary Ann, 17 to 18.

FRIDAY.—Market not quite so active. Prince of Wales, 37s. to 39s.; East Grenville, 2½ to 2½; Chiverton Moor, 60½ to 61½; West Seton, 152½ to 157½; Chontales, 2½ to 2½; Wheal Grenville, 24s. to 26s.

ACCOUNTS AND AUDITS.—Some valuable and interesting remarks on the new "Regulation of Railways Act," by Mr. H. LLOYD MORGAN, public accountant, have just been issued, in pamphlet form, by Mr. Effingham Wilson, of the Royal Exchange. Mr. Morgan's object is to show the additional security which railway shareholders will possess after Jan. 1 next, when the uniform system of accounts, now rendered compulsory by Act of Parliament, comes into operation. He points out that no railway balance-sheet can be issued after that date without being made up according to the forms of the first schedule of the new Act, under a penalty of £1 per day, until a correct balance-sheet has been supplied; and observes that, in all probability, uniformity of balance-sheets will next year be extended to banks, insurance, canal, dock, water, gas, and other joint-stock companies—each class of companies framing that particular form of balance-sheet which is most applicable to the proper conduct of their several undertakings. The pamphlet gives abundant evidence that the author has well considered his subject, and a vast amount of useful information can be obtained from his pen.

CURRENCY REFORM.—An interesting little pamphlet upon this important subject has just been issued by Mr. N. A. NICHOLSON, M.A., of Trinity College, Oxford (through Messrs. Tribner and Co., of Paternoster-row), entitled "Observations on Coinage and our Present Monetary System." In which the coinages of England and France are carefully described and compared. Mr. Nicholson urges that there ought to be one standard of value in any one country, and but one; either one or other of the two metals should be selected as the standard, and coins of the standard metal should circulate at their intrinsic value, as so many stamped ingots of standard metal. The book is well worth of thoughtful and attentive perusal.

"THE LONDON BANKS AND FINANCE COMPANIES."—The September edition of this very useful little directory has just been issued by Mr. E. Utley, of Threadneedle-street, and appears to have been corrected with the utmost care. The information given with regard to joint-stock banks and similar companies embraces all that is likely to be required by the man of business—it gives the names of the directors and managers, address of chief offices and branches, date of establishment, subscribed and paid-up capital and reserve fund, number and amount of shares and number and liability of shareholders, as well as the particulars of dividends, dates of meetings, form and cost of transfer, &c. In addition to this there are lists of the London private banks, with the names of the partners, of the discount brokers, financial agents, &c., and alphabetical lists, which serve as indexes to the other portions of the book. As abstracts of the latest reports of the banks, credit, finance, and discount companies are given, the book will be well worth preserving as a work of reference, whilst for present use it is certainly invaluable.

"FARMERS' ALMANACK."—The eleventh annual edition, that for 1869, of "Thorley's Illustrated Farmers' Almanack," has just made its appearance, and is fully equal in interest and utility to any that has preceded it. As usual, a vast number of amusing little sketches have been brought together, and from these a considerable amount of really valuable facts may be learned even by those who are not altogether unacquainted with the advantages derivable from the use of Thorley's Food for Cattle.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Sept. 13 amounted to 10,969, 7s. 8d.

HOLLOWAY'S PILLS.—Though these priceless treasures have many competitors for fame they have no equals for supplying the young and delicate with a simple, safe, strengthening and purifying aperient. Holloway's medicine is composed of the purest balsams, untainted by a trace of any element which could be possibly be obnoxious to the most tender organizations. This commanding quality makes these pills most admirably adapted to all the complaints peculiar to females at any age, and under all circumstances. Holloway's preparation cleanses both the solids and fluids which form the human body, and removes from every organ the very essence of disease, which consists in the circulation of foul, or the excess or paucity of pure, blood to the various corporeal structures.

Mining Correspondence.

BRITISH MINES.

ABRAHAM CONSOLS.—J. Vivian, Sept. 17: In the 27, driving east of shaft, the lode is hard, and disordered by the cross-course that has passed through it this week; but it is getting better ground again, and the lode making more regular. The same level, driving west, is hard, with stones of tin. I expect a change here shortly for the better.

BEDFORD CONSOLS.—J. Mitchell, Sept. 16: In the middle adit level, east of cross-cut, we are still driving by the side of the new south lode; the ground is a little easier for progress than when last reported on, and of a highly mineralised character. In the western end we are carrying about 20 in. of the lode in the upper part of the end, which is principally capel and spar, spotted with mundle and copper ore; we purpose cutting it through the early part of next week, in order to ascertain its size and character.

BRYNISTWYTH.—J. Tregoning, Sept. 15: I have set the bargains to-day. The men in the north cross-cut have driven 3 fathoms this month, and they have got 1 fathom more before their stent will be out; the end is still very wet. I have set, to four men, to drive from the western end north; they have taken 4 fathoms stent, at 4½ per fathom, and I think I have given them a fair price. We are getting on very well in clearing out the stuff from the eastern end; we are now under the rise in the furthest end, and we find great many lumps of lead in it as solid as cheese. We have one in the office about 40 lbs. weight, with splendid lead and a mixture of spar. I have put a man to costean on the bank between the house and the big tree; we have not cut the lode as yet, but we are expecting every day to cut a good lode of ore. I have had the timber brought up to make the whim, and I hope in a fortnight we shall get everything ready for working; the carpenters have taken it per contract for 3½ 10s. to complete.

CAPE CORNWALL.—R. Pryor, F. Hosking, Sept. 14: The ground in the 100 fathom level cross-cut, north of the engine-shaft, is just the same as when last reported on, and is strongly mineralised. In the 160 east the men are still cutting into the lode to the south of the level, which is producing some good stones of tin, but we have not as yet seen the south wall of the lode.

CARADON CONSOLS.—S. Bennett, Sept. 15: There is but little change to report in either the 78 north or west; the latter end is now just clear of the west end of the winze from the 68, the lode being much the same as in the bottom of the winze—large, somewhat disordered, and containing some good stones of ore. The 68 west, however, is much improved since yesterday; at the furthest point, the end, the lode is 1 ft. wide, composed of about equal parts of yellow copper ore and fluor-spar; 1½ foot north of this is nearly a perpendicular dropper of good ore 1 or 2 in. wide; this improved character of the lode, off the influence of these small cross-courses passed through some 3 fms. behind the end, looks very favourable for what has always been regarded as the most important part of the sett, in a geological point of view.

CASHWELL.—John Peart, Sept. 12: The vein in drift below the Sear Limestone going east has been very hard and slow to work lately, but this week it is broken, and will work a good deal faster, and is producing more ore. No. 1 stope next to the above drift forehead, is looking very well; the vein is 15 ft. wide, and mixed all through with ore. No. 2 stope is still producing very good ore, but is very hard. We have four men driving a drift in plate below the Slaty Hazle; we will drive this about 12 fms., and then make a rise into the Slaty Hazle to prove the vein at that point. We still have some good ore in the Slaty Hazle westward; the vein is only narrow, but has improved a little lately. Daukes' mine continues much the same.

CREN BRWYN.—James Paul, Sept. 15: Saturday last being our settling-day, and the water out again at the 50 fm. level, the following bargains were let:—The 80 west to four men, at 7½ 10s. per fathom; lode large, and the part on which the level is being extended is producing good saving work. The same level, east of shaft, is set to four men, at 7½ 6d. per fathom; lode 3 ft. wide, composed of spar, blende, and clay-slate, with good branches of lead ore, worth at present 14 cwt. per fathom, and presents every indication for further improvement. The 50 east is a full statement of engine-shaft, is in a hard and very promising lode, full 4 ft. wide, containing good spots of lead ore, and letting out a good deal of water—in fact, we may fairly expect to get into a good bunch of ore here any day; set to four men, at 6½ 5s. per fathom. No change of any moment has occurred in the cross-cut north at the 20 fm. level since my last report; this point is set to four men, at 5½ per fathom. Nothing has been done at the 92 fm. level for some time past, in consequence of the water being in; and I am sorry to say our wells are again idle, for want of surface water, as are also the greater part of the mines in this neighbourhood; but I hope we shall soon have rain to set us in full work again.—P.S. The north lode must have taken (as I have before stated) a more northern direction in going eastward, from the regular bearing seen in the western part of the mine, or it would have been intersected ere this; these are things which often occur, and I hope we shall soon intersect it now. The mine, on the whole, since the commencement has opened out well, and its prospects are good. But little has been done at the different levels since a full statement was given of what had been done since the present company started the mine.

CHANTLER.—William Wasley, Sept. 17: We are making good progress in driving the 90 yard level, west of shaft. The lode in the present end is about 1 ft. wide, composed of clay, spar, &c., and is producing some fine lumps of ore. We sold 6 tons of ore last Thursday, at 11½ 6d. per ton; this lot would have been 10 tons, only owing to the dry weather we had no more water to dress. I hope, however, that we shall soon have rain, and be able to dress another lot in time for the next sale at Holywell, on October 8.

CHIVERTON.—James Juleff, John Dorrise, Sept. 17: In the 78 fm. level end, east of the old engine-shaft, the lode has improved since the meeting; it is 1 ft. wide, composed of spar and mundle. In the 78 cross-cut north there is still a large quantity of water flowing from the end, and the men making fair progress in driving. At the north trial shaft we are cross-cutting north and south in a good looking channel of clay-slate.

CHIVERTON MOOR.—J. Juleff, Sept. 17: The 55 fm. level cross-cut is driven south of the engine-shaft, and making good speed. In the 75 east the lode is 1 ft. wide, composed of spar and fluor-spar. In the 65 east the lode is 4 ft. wide, with a very kindly appearance, and producing good stones of silver-lead. We are pleased in being able to state that the 75 west has very much improved, and is now producing some good lead work, worth 5 cwt. per fathom. We hope to get the stows to work at Clogg's shaft on Saturday next.

CRELAKE.—W. Skewis, W. Hooper, Sept. 17: We have about 7 fms. more to drive in the 30 fm. level west to complete the 30 fms. contract set in June last, and which will have fulfilled the stipulation contained in the new lease for this year; after this is done we purpose to put two men in the 62 fm. level west, and two to drive a 15 fm. level west from new air shaft. The lode in the 62 fm. level west is 2 ft. wide, composed of capel, quartz, mundle, and copper ore, but not in paying quantities. In the 40 fm. level west the lode is again cut off by a slide, and as yet we are not prepared to state whether it is thrown north or south; of this we shall see more in the course of a few days. The lode in the rise in the back of this level is 4 ft. wide, worth from 12 to 14 per fathom, and likely to continue, if not improved. The lode in the 28 west is 2 ft. wide, worth 6½ per fm.; this end is 10 fms. short of the point where the rise is going up in the back of the 40, and the ground in the end is getting very similar in character, as is also the lode; therefore, we are fully expecting to lay open a good piece of ore ground here. All the stoves are now set, at tributes varying from 4s. 6d. to 9s. in 11. for copper.

CUDRA.—F. Puckey, Sept. 16: In cross-cutting the lode in the 142 fm. level, west of Walker's shaft, we have cut through the tin part, which is 4 ft. wide at this point; the lode is composed of quartz, a good natured peach, and producing a little tin, but not sufficient to value. We are again urging on the driving of the end in the kills, by the side of the lode, to get back under the tin ground that is gone down from the level above as soon as possible. The different stopes, and all other parts of the mine, are without alteration since last reported on.

CWM ERFIN.—Sept. 8: In the 20, west of the cross-cut, the lode is 9 inches wide, worth 5 cwt. of ore per fathom. The stope in the bottom of the 10 will produce 15 cwt. of ore per fathom. The stope in the bottom of the deep adit is worth 5 cwt. per fathom. In the rise in the back of the deep adit the lode is 2 feet wide—poor. The stope in the back of this level produces 1 ton of ore per fathom. There are also three stopes in the back and one in the bottom of the same level, producing, on an average, 1½ ton of lead ore per fathom. The lode in Taylor's drift is small and poor. There are four stopes working in the back of this level, producing, on an average, 15 cwt. of lead ore per fathom. The stope in the back of the 10 will produce 15 cwt. of ore per fathom. The stope in the bottom of the 10 will produce 15 cwt. of ore per fathom. There has been nothing met with in our cross-cuts.

DEEP LEVEL.—Sept. 14: The lode in the deep level, going west of junction, on Pant-y-go vein, is 18 in. wide, principally composed of spar, with spots of blende and lead ore, but not sufficient of the latter to value; the driving of this level is in hard ground. In the deep level, going south-west on the deep level vein, the lode is 12 in. wide, yielding occasional spots of ore. There is a pitch working over this level producing 10 cwt. of lead ore per fm. The lode in the

winze sinking below the 174 yard level, east of Eaton's shaft, on Pant-y-go vein, is 2 ft. wide, and worth 1 ton of lead ore per fm.; we have nine men at work here, making good progress in sinking. In the 304 yard level, east of Eaton's shaft, on Pant-y-go vein, the lode is 18 in. wide, producing good stones of lead ore. The 174 yard level, west of Pant-y-go shaft, on Pant-y-go vein, continues without much change to notice; the lode is 3 ft. wide, producing occasional stones of lead ore, but not to value. There is no change to notice in Trustees' shaft; the men are making fair progress. The old tribute pitches throughout the mines continue to yield about their usual quantity of ore. We have about 12 tons of clean ore on the mines.

EAST CHIVERTON.—J. Grose, R. Southey, Sept. 17: The sinking of Bartlett's shaft is being proceeded with as fast as possible, now down better than 8 fathoms below the 25; the ground, although hard, is very congenial for the production of silver-lead ores, and we have every reason to believe that the lode when intersected at the 40 will meet our expectations. Since July we have sunk the boundary shaft 12 fathoms, and driven the 25 fm. level end west under the same, and are daily expecting to communicate, which will thoroughly ventilate the mine, when we shall at once resume the drive of the main cross-cut north, where we are certain of intersecting one or two lodges, proved at surface to traverse this part of the property, and from which we look for good results.

EAST GUNNSLAKE AND SOUTH BEDFORD CONSOLS.—J. Bray, Sept. 17: There is no change in the 36 fm. level cross-cut south. The lode in the shallow adit is 3 ft. wide, composed of spar, mundle, and peach, with stones of ore. The lode in the Impham adit is 4½ ft. wide, producing 3 tons of ore per fathom; this end is driven 2½ feet below the boundary. We are taking out the wheel-pit at Impham as fast as possible.

EAST POOL.—W. S. Garby, John Maynard, John Hosking, Sept. 14: Great Lode: The 170 is driven east of the cross-cut 32 fms., and is worth for tin 12½ per fathom. The 170 is driven west of the cross-cut 36 fms., and is worth for tin 25½ per fathom. The 160 is driven west of the cross-course 36 fms., and is worth for tin 18½ per fm.—Engine Lode: Two stopes in the back of the 170 are worth 20½ per fathom each.—South Lode: The 130 is driven east of the cross-course 18 fms., and is worth for tin and copper 12½ per fm. The rise in the back of the 130, on the cross-course, is up 22 fms., with stones of copper and tin ore in it. The stope in the bottom of this level is worth for copper ore 30½ per fm. The winze below this level is down 8 fms., and is worth for copper ore 20½ per fm. The 100, west of cross-course, is worth for copper ore 5½ per fm.

EAST ROSEWARNE.—C. Glasen, Sept. 17: In the 115 fathom level, west of King's shaft, the lode is 10 in. wide, worth 6½ per fm. In the 115 fm. level, east of shaft, the lode is 12 in. wide, worth 4½ per fm. In the rise in the back of the 105 fathom level, west of shaft, the lode is 6 in. wide, producing good stones of copper ore. In the 95 fm. level, west of shaft, the lode is 15 in. wide, worth 8½ per fathom. In the 95 fm. level, east of shaft, the lode is 12 in. wide, producing stones of ore, but not enough to value. The stopes in the back of this level have improved since my last report, now worth 10½ per fathom.

EAST SETON.—Joseph Vivian and Son, William Thomas, Jun., Sept. 17: At Bassett's shaft we continue our cross-cuts both north and south in the 20, and expect to reach a lode or two within a short period. The sinking of Cartwright's shaft progresses in accordance with our expectations, and is perfectly dry.

EAST SNAPELL.—W. H. Rowe, Sept. 16: We shall be taking down the lode at the engine-shaft by the end of the week, when I will send you a report both of it and the 20 north. I have arranged to ship our ore with the Laxey parcel.

EAST WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennett, Sept. 16: The lode in the tribute pitch in back of the 110 west has improved, and will now produce 3 tons of rich ore per fathom. At the 110 east, on the counter lode, we have not yet intersected the lode to the east of the cross-course, but are expecting to do so daily. The lode in the rise above this place is worth 1½ ton of copper ore per fathom. The lode in the winze sinking below the 95 is worth more than 2 tons of ore per fathom. In the rise above the 95 the lode will yield in the eastern end 1½ ton of copper ore to the fathom. In the winze sinking below the 75 the lode is worth for the length of the winze from 6 to 7 tons of ore per fathom; the ore is of excellent quality. The 65 fm. level cross-cut, from the counter, is extended 5 fms.; the 55, 7 fms.; and the 45, 4 fms., the ground being precisely the same as that we had in the 75 fm. level.

EAST WHEAL RUSSELL.—William Richards, Sept. 17: There is no material change in the operations of the mine since the date of my last report. The tributors are working with spirit, and we shall prepare to sample their ore at the end of this or the beginning of next month.

GAWTON COPPER.—G. Rowe, G. Rowe, Jun., Sept. 12: The ground in King's engine-shaft, sinking below the 70, is improving, and our progress very satisfactory. The south cross-cut going through the lode, at the 70 west, is producing very strong mundle, with occasional stones of ore. The lode in the 70 east is looking very healthy, worth stones of ore per fathom, but the ground is hard to dig, and our progress rather slow. The lode in the rise in back of this level is principally composed of capel and spar, with a little ore. The lode in the stope at the 60 east is yielding 3 tons of ore per fathom. The lode in the 60 east is without change. The winze and stope going down below the 60 are worth from 3 to 4 tons of ore per fathom. Ennor's pitch, in back of the 50, is worth 2 tons of ore per fathom. All other points in operation are without change.

GONAMENA.—Richard Pascoe, Sept. 15: The 138 west, on Venning's lode, is worth 2 tons of ore per fathom. We have commenced to sink a winze below the 126 on this lode, where it is worth fully 4 tons of ore per fathom. We are pushing on this place as fast as possible to communicate with the 138. Nothing new in any other part of the mine.

GREAT LAXEY.—J. Barkell, Sept. 16: We have completed the alterations in our main-rods and pitwork down to the 130 fm. level, and so far all is strong and secure. We have connected the rods at the above-named level, and our intention is to fork the water to the 220, so as to enable us to resume the driving of the 210, 200, and 190 fm. levels north, and then to proceed with the further alterations still necessary to be made in the rods and pitwork. The 200 fathom level end, is now full of water, is worth 70½ per fathom; and the 210 fm. level, is not looking so well, but we are not out of the influence of the level, and are still shooting off the side of the 190 fm. level, where the lode has increased from 12 feet to 14 ft. in width, and is worth about 120½ per fathom. The 180 is also increasing in value as we go north, the end at present being worth about 55½ per fm. The 165 is worth 70½ per fathom, and there is a part of the lode still standing to the east side of the level, which is being shot off, and which is likely to increase the value of the end to 80½ or 90½ per fathom. The 155 fm. level end, driving north, is not looking so well; but we are not out of the influence of the level, and are still interested; end worth 70½ per fathom. The stope in the roof of the 165 (about 3 fms. in advance of the 155 fm. level end) are worth 120½ per fathom. In the 145 the ground is hard and slow for progress, consequently there is but little change to notice; the lode in the end is worth about 50½ per fathom.—Dumbell's: The engine-shaft is now down about 14 fms. 3 ft. below the 125 fm. level, and we intend to sink it about 3 ft. deeper before we commence to drive. To sink this 3 ft., and bring down the main-rods and change the pitwork, about 400 cwt. of this level, and the whole of the greater part of next. When the work is completed we shall drive both north and south, and sink a lode through 50½ per fathom. The sump sinking below the 125 is worth 100½ per fathom, and there is still a part of the lode standing, the value of which we do not know; the sump is about 20 fms. north from shaft. The 125 fm. level end, driving north, is worth from 80½ to 90½ per fathom; and we have a sump coming down from the 110, about 20 fms. in advance of the 125 fm. level end, worth over 100½ per fathom, thus showing a section of rich ore ground now being laid open for more than 100 fms. in length. The 110 fm. level end, driving north, is still in advance of the northernmost sump about 15 fms. which is 15 fm. wide. The lode in the a lode averaging in value from 20½ to 70½ per fathom; the end at present is worth about 40½ per fathom. There is not much change to notice in our driving above the 110 fm. level. The 70, driving south, is still worth about 70½ per fm.; and the 60, driving north, is worth about 50½ per fathom. The 60, driving south, is poor, but if the rich bunch of ore driven through in the 70 holds up the end must shortly improve. The stopes and pitches throughout the mine are yielding about their usual quantity of ore. Since the rain came on we have forked the water out of the shaft, and just resumed the sinking. The lode in the shaft is about 3 ft. wide, and is producing occasional stones of lead and blende. The 25, driving north, is producing about 10 cwt. of blende per fathom, and looking very promising for further improvement.

GREAT NORTH DOWNS.—W. Rich, Cornelius Bawden, Sept. 16: We have intersected a branch 1 ft. wide in the 14 cross-cut south, carrying good stones of strong yellow copper ore. We consider there are some 3 or 4 fms. further to reach the lode in this cross-cut—the lode is supposed to have the same under the level, as has been seen at that level. The sinking of Butler's shaft is being urged on below the 75; the lode at present is unproductive, but the ground appears changing for the better. The 75, east of Butler's, is being driven by four men; the lode is worth 6½ per fm. The stope in the 64, east of Butler's, are worth 12½, 10½, 8½, and 7½ per fm. We have completed trip-plat at Sleggan's, and resumed driving the 84 east; the end is worth 6½ per fm. The 84 west looks more promising, and carries good stones of ore. We have set Sleggan's shaft to sink at 80½ per fathom, instead of 35½ per fm., as heretofore; a very favourable change, taken place in the character of the ground in this shaft, and we trust it will have soon a good effect on the composition of the lode. The four stopes, west of Sleggan's, are worth in the aggregate 40½ per fm. There is nothing new to report on in the 84, west of King's; the stopes in the level are worth 12½ and 7½ per fm. respectively.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Sept. 16: No. 1 Lode: The lode in the shaft sinking below the 30 has improved, now worth 7 to 8 cwt. of silver-lead per fathom. The 20 north is worth 5 cwt. of ore per fathom, and the 20 south, 4½ per fathom. The stopes are worth 4 cwt. per fathom. The prospects in this part of the mine are very good indeed—a more promising lode for the depth we never saw, and, as we said before, the lode shows all the characteristics of the West Chiverton lodes.—No. 2 Lode: We have no change to report in the winze sinking below the 20; the water is more quick than it was, and the lead is dipping northerly very fast, and, therefore, until the 30 fm. level end touches the shoot of lead we shall not be able to make much progress with the winze; the lode now in the winze is worth nearly double what it was when the winze was commenced, and we think there is little doubt of the 30 opening out a good course of lead.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, Sept. 14: We are making fair progress in sinking the new shaft. The lode in the winze below the 30 is larger, and will yield from 3 to 4 cwt. of lead per fathom. The lode in the 30 is best towards the bottom of the end, where it will yield 8 cwt. of lead per fathom. The 40 east is improving in appearance, and is likely to get into something valuable shortly. There is no change of importance in the 50 west since last week; the lode and the ground about it are most congenial for lead, and we expect to get into it in a little further driving. The lode in the 50 east is larger, and looks better than it has for several weeks.

GREAT SOUTH TOLGUS.—John Daw, Sept. 16: Friday last was settling-day. We have suspended sinking Noel's shaft for a short time, in order to fix a drawing-lift, and also to see if another part of the lode is to the north of the shaft, as the part we have been sinking on has been small for several fathoms. In the 150, east of Noel's shaft, the lode is 1 foot wide, producing stones of ore; set to six men, at 6½ per fathom. In the 140 east the lode is disordered by the elvan and ironstone; set to six men, at 4½ 10s. per fathom. In the winze sinking below the 140, on the tin lode, the lode is 4 feet wide, worth 12½ per fathom; set to six men, at 6½ 10s. per fathom. In the 150, and under this winze, we have a tribute pitch working, which has very much improved, and we have now commenced to make a communication between the winze and the 150, and this is completed it will lay open a good piece of tin ground. In the 150, east of new shaft, the lode is 1½ foot wide, producing stones of ore, and is of a very promising character; set to four men, at 3½ 10s. per fathom.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, Sept. 12: In the 75, west from the cross-cut, on the tin lode, at Hill Brothers engine-shaft, the ground has been much the same for driving during the past week, and the lode near 5 ft. wide, producing occasional stones of tin. In the 75, west from cross-

hope to cut through before our next, when we will give more particulars.

WHEAL KITTY (Ughy Lelant).—Wm. Rosewarne, Sept. 17: South Rusoo Lode: The lode in the boundary shaft, sinking below the 40, is worth for the length of the shaft (9 ft.) \$1. per fm. The lode in the winze sinking below the 40, east of the shaft, is worth 47. per fathom.—North Gowan Lode: The lode in Bolitho's shaft, sinking below the 20, is worth for the length of the shaft (9 ft.) 141. per fm. The lode in the 50, east of the rise, is worth \$1. per fm. The lode

in the 20, west of Bolitho's, is unproductive. The lode in the 20, east of Bolitho's, is producing a little tin.—North Ruscoe Lode: The lode in the 160, west of Bolitho's, is worth 57, per fathom. The lode in the 160, east of Bolitho's, is worth 57, per fathom. The lode in the 140, east of the cross-cut, is opening up tribute ground.

WHEAL MARY FLORENCE.—W. Verran, W. John, Sept. 14: We are pushing on the sinking of Saw's shaft with all possible speed, and are now down 2½ fms. below the 15, in a highly mineralised channel of ground, and hope by the end of the present month to be the required depth for the next level, when we shall immediately commence cross-cutting to the lode, which will be intersected in about 5 fms. driving, where we anticipate pleasing results. In rising above the 15 towards the deep adit we are making satisfactory progress, being up nearly 8 fms., and shall use every effort to get this communication effected as quickly as possible. We look forward with considerable interest to the accomplishment of the above-named objects, believing it will be followed by great and good results.

WHEAL RUSSELL.—John Bray, Sept. 17: Adit Level, Imphon Lode: The lode in the adit level is from 4 to 5 ft. wide, and producing 3 tons of copper ore per fathom; this level is now in our sett. From present appearances and the general character of the lode, I believe you have a most valuable property.

WHEAL SPARNON.—W. Tregay, Sept. 12: The north lode, in the 50 west, has been holed by the western limb of the cross-course, and we have now to cross-cut a short distance to intersect the lode beyond the hoist. The lode in the 140, east of engine-shaft, is still worth 407, per fathom. The other points in the mine are of the same value as reported last. We have sold to day 11 tons 16 cwt. 2 qrs. of black tin to Bolitho and Sons, at Angarrack, at 53s. 17s. 6d. per ton.

THE YUDANAMUTANA COPPER MINING COMPANY OF SOUTH AUSTRALIA.—With reference to the various communications which have appeared relative to the non-confirmation in the last advices from the mines of the intelligence received by the telegram, the solicitors to the company (Messrs. Pattison, Wigg, Gurney, and King) state that immediately on receipt of the telegram they forwarded a copy to their superintendent at Adelaide, with a request for full information. They have since renewed their application with urgency, and authorised him to offer a reward of 100l. for discovery of the perpetrator of the hoax, if it be one. They have also instituted investigations along the course of telegrams from Adelaide, and by the courtesy of Col. Goldsmith, the superintendent in this country of the Anglo-Indian Telegraph Service, full investigations are ordered at Point de Calé and also at Kurrachee (where the telegrams are made up), and the attention of the superintendent-general at Calcutta has been solicited. The authorities are thus seconding their exertions, and no effort will be spared to expose the matter, whether it arose from folly or fraud.

THE COPPER TRADE.—The improvement in the prospects of the copper trade, noticed a fortnight since, was again apparent at the Cornish Ticketing on Thursday, when a rise of 2½ in the standard took place, more than half recovering the drop of the previous week. Considering the large quantities of South American and Cuban ores almost daily arriving in South Wales—more than has been received for some months past—the circumstance of there being no decline cannot but be regarded as favourable. The smelting of a portion of the Chilean ores at the mines, in order to avoid expense in carriage, is not likely prejudicially to affect the English copper trade, for the regulus and bar copper must be shipped chiefly to England, and sold to the British smelters, at prices to compensate for the outlay made in Chili. It may be confidently anticipated that before the spring a very material rise in the price of all descriptions of copper will have taken place.

MANUFACTURE OF IRON AND STEEL.—Mr. Charles Sanderson, whose name is well known in connection with improvements in the manufacture of iron and steel, proposes to add to the charge in the puddling-furnace, before the metal comes to the boil, some sulphate of iron, to remove the sulphur, phosphorus, and other volatile impurities. An improvement in the manufacture of steel has also been invented by Mr. J. Giers, which consists in the use of manganese iron ore as an admixture to the ordinary ore, and in a peculiar arrangement of crucibles, so that the steel can be obtained in quantity.

THE LIQUIDATION ACT, 1868.—A useful Act of Parliament received the Royal Assent on July 31, which is applicable to all cases of bankruptcy, winding-up of companies, or arrangements with creditors, the proceedings in which were commenced before the passing of the Act. This statute enacts that in all such cases the persons engaged in winding-up the estate in question, or "liquidators," may, having previously obtained the approval of the Court of Chancery, divide any part of the estate amongst the creditors, in specie or otherwise, without a sale; and may make any arrangement with secured creditors by which they may take the securities held by them in total or partial discharge of their debts. The statute further provides that in any case of an estate being wound-up, subject to the Act, any secured creditor may obtain an absolute foreclosure of the property mortgaged to him, on giving to the liquidators six months' notice requiring him to claim to be discharged. The provisions of the Act will be beneficial to the liquidation of many estates, and it is a pity that the powers are confined to estates in which proceedings were commenced before July 31, 1868.

INTERESTING EXCURSION OF THE SOUTH STAFFORDSHIRE MINE AGENTS.—The members and friends of the Incorporated Association of Mine Agents of South Staffordshire and East Worcestershire made their last excursion of the year on Monday and Tuesday, to the far-famed Pendlebury Colliery, near Manchester, belonging to Messrs. Andrew Knowles and Son, and to the Leeds Fine Arts Exhibition. The party, about 50 in number, left Dudley Port Station on Monday morning, in two spacious first-class saloon carriages, at 8.5, picking up at the different stations, and arriving in Manchester at 10.55. At Manchester the party were met by the proprietors of the colliery, and a hearty welcome was accorded them. The Pendlebury Colliery comprises several extensive coal-winding plants, and contains about 6000 acres of coal ground. The present capabilities of the collieries belonging to the firm are about 20,000 tons per week. There is an underground high-pressure, horizontal, direct-acting pumping-engine employed, which works a double-acting 7-in. ram, 6 ft. stroke, fixed on each end of the piston-rod, and forces the water up a rising 9-in. main, in one column, 320 yards long to the surface. It works seven strokes per minute, and is fed by two double-flued Cornish boilers, 27 ft. by 7 ft., placed underground, has been at work 12 months, and answers admirably. This splendid piece of machinery was inspected by the visitors with eager interest, and considerable discussion arose upon it. The party then proceeded to the Pendleton Pits, which are about two miles from Manchester, and are of the extraordinary depth of 520 yards to the Ham's Mine. These pits raise about 800 tons per day. After the party had made an inspection of the surface arrangements, they descended the pit, a depth of 520 yards, and after spending some time in inspecting the magnificent underground hauling engines, the whole party, in batches of 16 at a time, descended the engine planes of 1 in 3, for a distance of 600 yards, and inspected the workings in the Shuttle and Crumbeke Mines. At the end of the engine planes the coal is now being worked at a depth of 720 yards from the surface, and from the great heat of the mine at this depth, the visitors were only too glad to be drawn up the engine plane again to the pit bottom, which was effected at the rate of about 14 miles an hour. On Tuesday the Leeds Institution was visited, together with the principal buildings in the town. Leaving Leeds at 3 P.M., the party returned to Dudley at 2.55, evidently much pleased with the two days' excursion.—*Birmingham Daily Post.*

ARTIFICIAL PRECIOUS STONES.—How is it that the imitations of precious stones made in England are usually so inferior to those produced on the Continent? In Italy, Germany, and France the artificial product is often so perfect that, in many cases, it would be necessary to destroy the stone in order to prove satisfactorily that it is an imitation. The primary material from which the different kinds of artificial stones are made on the Continent is as follows. We are indebted for it to Herr Elsner. Great attention must be paid to the exact proportion of each substance named:—Pure pulverised quartz, 45-7 parts by weight; pure dry carbonate of soda, 22-8; calcined borax, 7-6; saltpetre, 5-4; pure red lead (minium), 11-8 parts by weight. These substances, taken accurately in the above proportions by weight, must be thoroughly mixed together, then introduced into a Hessian crucible, and heated to a vivid red heat in a charcoal fire. In England coal is often used instead of charcoal, and this has probably a noxious influence on the product; by the sulphur which coal invariably contains. Sulphur vapour could penetrate through the pores of the crucible, and its action upon mineral colours is well known to be very considerable, even when present in minute quantities. When the mixture has been thoroughly melted, the product is a transparent crystal glass of very great brilliancy. In order to imitate the various precious stones, certain oxides or carbonates are added to the above ingredients in the following proportions by weight:—For amethyst add 0-100 carbonate of cobalt, for emerald add 0-530 oxide of iron, for sapphires add 0-265 carbonate of manganese, for topaz add 1-590 oxide of uranium. According to M. Donat, a magnificent description of artificial ruby can be obtained in the following manner:—Of the mixture given above to produce the white, transparent basis of all these stones, 31 parts by weight are taken, which, finely pulverised, are intimately mixed with glass of antimony 2-30 parts, and purple of Cassius 0-06 parts. On cooling this mixture after being well melted it sometimes gives a transparent mass, and at others an opaque product. When transparent it is a brilliant imitation of the topaz; when opaque it forms a splendid imitation ruby by melting 2 part of it with 3 parts of the primary material (1st formula given above). The product when taken from the crucible is in the form of a brilliant yellow crystal, but before the blow-pipe it is transformed into a vivid red crystal, having exactly the tint of the oriental ruby. In making these imitation stones it is essential to success that the fusion of the various mixtures should be thoroughly operated, without which the product will surely be of an inferior description. The artificial stones gain considerably in brilliancy by being cut, and this operation has very great effect upon their appearance when set as jewels. In England the cutting is often very carelessly done. The different ingredients should be taken in a very fine state of division, intimately mixed before fusion, melted at a gradually rising temperature, maintained with great uniformity when at its maximum from 20 to 30 hours, and the cooling must take place very slowly.—*Scientific Review.*

DEATH.—Mr. JOHN VAUGHAN, of the firm of Bolekow and Vaughan, the extensive iron manufacturers of Middlesbrough, after a lingering illness, extending over 18 months, at his London residence, Hyde Park-gate, on Wednesday. The life of Mr. John Vaughan is inseparably connected with the Cleveland iron trade, and Messrs. Bolekow and Vaughan's great works at Middlesbrough, Eton, and Wotton Park are well known.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPT. 18, 1868.

COPPER.				IRON.			
Best selected, p. ton	£	s.	d.	Per ton.	£	s.	d.
Tough cake and tile	76	0	0	Bars Welsh, in London	6	10	0
Sheeting and sheets	78	0	0	Do, to arrive	6	10	0
Bottoms	82	0	0	Nail rods	6	10	0
Old (Exchange)	68	0	0	Do, Staffd. in London	7	10	0
Barra Barra	80	0	0	Do, ditto	7	10	0
Wire, per lb.	0	10	11	Hoops ditto	8	2	6
Tubes	0	11	11	Sheets, single	9	2	6
BRASS.				Fig No. 1, in Wales	8	16	0
Sheets, per lb.	7½	d.	8½	Refined metal, ditto	4	0	5
Wire	8½	d.	—	Bars, common ditto	6	0	—
Tubes	10½	d.	—	Do, march, Tyneor	6	10	0
Yellow Metal Sheath, p. lb.	6½	d.	7½	Do, railway, in Wales	6	0	—
SPELTER.				Do, Swed. in London	9	17	0
Foreign on the spot, £20	0	20	5	To arrive	10	0	10
Do, to arrive	20	10	0	Fig. No. 1, in Clyde	2	14	3
ZINC.				Do, f.o.b. Tyneor	2	6	—
In sheets, £24	10	0	25	Do, Nos. 3, 4, f.o.b. do.	2	6	—
TIN.				Railway chairs	5	10	0
English blocks	96	0	0	Do, spikes	11	0	12
Do, bars (in barrels)	97	0	0	Indian Charcoal Pigs,	7	0	7
Do, refined	98	0	0	In London, p. ton	7	0	7
Banco	92	0	0	STEEL.			
Straits	92	0	0	Swed., in kegs (rolled)	14	5	0
TIN-PLATES.				Do, (hammered)	15	0	15
Per box.	£	s.	d.	Ditto, in fagots	16	0	—
IC Charcoal, 1st qua.	1	5	6	English, spring	17	0	23
IX Ditto, 1st qua.	1	11	6	QUICKSILVER (p. bottle)	6	17	0
IX Ditto, 2d qua.	1	4	6	LEAD.			
IX Ditto, 3d qua.	1	10	6	English pig, com.	18	15	0
IX Coke	1	2	6	Ditto, L.B.	19	0	—
IX Ditto	1	8	1	Ditto, W.B.	21	5	0
Canada plates, p. ton	13	10	0	Ditto, sheet	19	17	6
Ditto, at works	12	10	0	Ditto, red lead	20	0	20
* At the works, 1s. to 1s. 6d. per box less.				Ditto, white	20	0	30
				Ditto, patent shot	22	0	22
				Spanish	18	5	18

REMARKS.—Continued signs of improvement have been manifested in the Metal Market during the past week, and a decidedly better feeling is apparent, which confirms the anticipation that a good business will be done during the autumn. The general enquiry has increased, and buyers now seem much more disposed to enter into transactions than they have been for some months past. In some metals, especially, a very considerable business has been done, and in this quarter the demand continues very abundant. It appears, also, to be the general impression that metals have now seen their lowest point, and that a revival will speedily occur, not only in the demand, but also in prices, which latter may be considered as a necessary consequence of the former, as it invariably occurs that an advance in prices takes place as soon as there is an improvement in the demand. Rumours of war seem again to be in existence in France, and the question has been very ably argued by M. Guizot, in an article which he has written in a French paper on the subject of peace or war, in which he appears to be decidedly of opinion that war will not take place; and in the speech of the King of Prussia at Kiel, he states that he does not see any cause for the disturbance of peace throughout Europe; and although there appears to be a considerable war feeling among certain parties in France, yet we trust the Emperor Napoleon (with whom, doubtless, the decision rests) will not allow himself to be led into a war which, from his former statements, it appears he does not desire. We trust, therefore, to find that the peace of Europe will not be disturbed, and that we shall be preserved from war, which is so detrimental to the interests of commerce. In America the great excitement incident to the approaching election of President is, for the time, very prejudicial to business, as all energies seem directed towards the great event; but as soon as this is over there is no doubt that business will flow again into its accustomed channels.

COPPER.—There appears to be some hope that the long-continued depression in which this metal has remained is about to pass away, and a more satisfactory state of business to return. The importation of ores into Swansea during the past week has been considerably above the average for many months past, and trade at the various smelting works is more brisk than formerly. Prices are becoming rather firmer, especially for manufactured.

IRON.—In Staffordshire orders are coming in satisfactorily, this being, no doubt, promoted by the approach of the end of the quarter, and the anxiety of merchants to ship before the winter season, which usually stimulates the demand at this time of the year. In some makes there is a slight improvement in prices, but the full trade rates are far from general; as a rule, the works are in nearly full operation, but there are exceptions to this, and many have only orders sufficient for a fortnight or so. In Welsh, employment at the works is rather more regular than it has been. Russia is just now the principal customer, and the contracts that have come to hand from that country during the last three or four weeks have been considerable. American advices are tolerably favourable. Last month the exports reached 14,721 tons, of which Cronstadt took 3271 tons, New York 2963 tons, and New Orleans 2661 tons. Home business has moved to a slight extent, and the railway companies are beginning to enter into transactions with more freedom. In Swedish iron the demand continues very good, and several parcels have been sold during the week, the consequence of which has been that prices have rather advanced. In Scotch pig-iron the market has been rather quiet during the week, and prices have not much varied, the last price received from Glasgow being 53s. 9d. cash.

LEAD.—A moderate business continues to be done, and prices remain firm at the quotations.

TIN.—The market for Straits has become somewhat firmer during the week, and holders are less disposed to sell, at 92½ cash. Banca, &c. the ensuing sale, has also been sold at 92½, but has since obtained a trifling advance. The tendency of the market at present appears certainly to be upward.

SPELTER.—A little more business has taken place during the week, and a small parcel for November delivery has been sold at 20½. 10s. For parcels on the spot the quotation remains 20½ to 20½ 5s.

TIN-PLATES.—Manufacturers are obtaining better prices for coke qualities, and charcoal commands an average sale.

STEEL in moderate demand. **QUICKSILVER.**—Not much doing.

THE COPPER TRADE.—Messrs. Pitcairn-Campbell and Co. (Liverpool, Sept. 15) say—Importers have freely met the demand, a very large business has resulted in both furnace material and bars. The market closes firmly at our quotations. The disastrous telegraphic news received from Ecuador and Peru, advising the occurrence of an earthquake, has caused considerable excitement in the market for nitrate of soda, but in the absence of details from Chili no alteration in copper has yet taken place. Quotations are—67½ to 67½ 15s. for Bars, 71½ for Urmeneta Ingots, 13s. 9d. to 14s. for good Chili ores and regulus, 14s. to 14s. 6d. for Corocoro Barilla. Business transacted during the fortnight comprises on the spot here 396 tons bars, at 67½ to 67½ 2s. 6d.; 150 tons Ingots, at 71½; and 10 tons Barilla, at 13s. To arrive here, 480 tons bars, at 67½ 12s. 6d. to 67½ 15s., and 30 tons Ingots, at 70½. On the spot, Swansea, 580 tons bars, at 67½; 67½ tons regulus, at 14s.; and 633 tons ore, at 14s. To arrive at Swansea, 240 tons bars, at 67½ 12s. 6d. to 68½; 30 tons Ingots, at 72½; 1830 tons regulus, at 14s.; and 620 tons ore, at 14s. At the Swansea Ticketing 2862 tons ore were sold, average produce, 13½; average price, 13s. 10d.; 1600 tons Australian ore sold by private treaty, at 13s. 9d.; and 480 tons Italian ore, at 13s. 6d. to 14s.

Arrivals here during the fortnight from West Coast:—Pampero, from Valparaiso, 55 tons bars; Don Guillermo, 56 tons bars; Santiago, from Valparaiso, 51 tons bars; Bell Hill, from Valparaiso, 260 tons bars; Talisman, from Colon, 45 tons bars, 120 tons Barilla; Little Edith, from Valparaiso, 22 tons bars; Albert William, from Valparaiso, 20 tons bars. At Swansea:—Uncas, from Caldera, 620 tons regulus; Carmelita, from Tocopilla, 632 tons ore, 232 tons regulus; Kappa, from Guayaquil, 544 tons bars, 252 tons Ingots; Admiral Fitzroy, from Caldera, 580 tons regulus; Cuzco, from Coquimbo, 510 tons regulus and 85 tons bars; Henry Ranking, from Huasco, 420 tons regulus; Florence Nightingale, 630 tons regulus.

Stocks of copper (Chilian and Bolivian), in first and second hands, likely to be available are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1125	650	5183	1198	806
Swansea	1981	982	460	235	138

Total 3086 1632 5643 1433 944

Representing about 800 tons fine copper, against 9700 tons fine copper Sept. 15, 1867; 8800 tons fine copper, Sept. 15, 1866; and 10,600 tons, Sept. 15, 1865.

Messrs. Vivian, Younger, and Bond (Sept. 18) write—The considerable transactions which we reported last week in West Coast produce have been followed again this week by an active demand, and we report a strong market at the close, with rather better prices. The sales of Chili copper since our last issue have consisted of 1100 tons of bars, at 67½ to 68½, per ton; and 595 tons of Ingots, at from 69½ for Lota, up to 71½ for Urmeneta. These sales make the total operations for the fortnight amount to 1900 tons bars, 600 tons Ingots, and

1925 tons of regulus; or (say), altogether, 3450 tons fine copper. The telegram from New York advising charters from Chili of only 360 tons of bars and Ingots, and 800 tons of copper in ores and regulus, for the first fortnight in August has given a slight firmness to the market, and there are rather buyers at the highest prices quoted. There is more enquiry for fine foreign and English manufactured copper at a slight advance. Tough and best, however, remain in the same position, and without demand. A good quantity of India sheets have been sold up to 78½, per ton, and 100 tons of Wallaroo has changed hands at 78½ to 78½ 10s.

Messrs. Wm. Bird and Co., in their monthly Circular, confirm the general opinion that the Metal Trade is improving: the difficulty for intermediate houses lies at present in the necessity for moderating on the one hand the somewhat too sanguine expectations of sellers with regard to an immediate sensible revival, and convincing buyers on the other that the low sales yet occasionally made public are rather to be considered as isolated cases than indicative of the state of the makers' order books generally. The foreign manufactured iron trade is better supplied with orders, and in some districts there is great activity. Swedish bars at late low prices have brought out buyers, and arrivals of several current sizes, which have run out of stock here, are awaited with impatience. Several sales of old iron are advertised, and prices are in buyers' favour. The Welsh market is at the present moment unquestionably the strongest, and the higher prices given for autumn shipments of rails, together with the extensive prospective demand, and the successful placing of the numerous railway loans recently issued, do not permit us to expect a relapse. English and Scotch lines have passed a few good contracts, and though there is a fall in the American demand, the enquiry for Russia and the Continent is lively; about 7000 tons of rails and accessories for Denmark have been secured. Light tramway and street rails are also now increasing in use and public favour, and New Zealand is a buyer for over 2000 tons. It is well known that foreign works are very full, and have secured railway orders extending far into 1869, which will weaken their competitive effect upon quotations here. This greatly strengthens prices of British make. Important enquiries for large classes of angle, T, and bar iron, as also for plates are on the Welsh market, with good chances of business resulting at a slightly advanced rate. For London delivery, the North of England and Belgian power of supply secures consumers from a sudden advance, and we can offer first-class makes of common bars at 6½ 10s. and under in the Thames. The direct foreign shipments (mostly rails) from the ports of Cardiff, Newport, and Swansea were for August 27,568 tons, or about 10,000 tons less than in August last year. The home demand for steel rails continues small, but very large quantities are in treaty, or talked of, for the United States, Russia, France, and other parts of the Continent. The Paris and Lyons Railway requirements alone are given as upwards of 40,000 tons. In Austria the Government proposes to retire from manufacturing operations, and the prospects of extensive demand animates various bodies and individuals to treat for the purchase of various mines and works which are thus for disposal. The armour-plate and other heavy branches of the trade are described as moderately busy, and orders for the general run of merchant steel and Sheffield goods leave less room for complaint. In Engineering Work there is still a want of orders, although many establishments are fairly employed, in some instances, it is to be feared, at not very remunerative rates. Amongst the orders for locomotives are some for Russia and Australia, and 20 for the Madras Railway Company, also locomotive, Cornish, and grasshopper boilers, and various workshop tools, steam cranes and pile-drivers, fire-engines, &c., for continental account. Various permanent way materials are also under tender for New Zealand and Australia. A few bridges of various sizes for Russian, Dutch, Italian, and Australian requirements have also been secured, and home contracts of the same character have not been inconsiderable. Several vessels of war, and large steamers, and dredger fleets are in course of construction or estimate, and promise a tolerable amount of winter employment to marine engine and other works, in connection with their fittings and requirements. As an interesting circumstance in international trade, the fact may be noted of several English passenger engines having lately been delivered in Belgium for working fast and heavy traffic on lines in that country.

The settlement of the fortnightly account took place in the MINING SHARE MARKET on Wednesday, and was very heavy in several descriptions of stocks. The market has also been particularly active for Prince of Wales, West Chiverton, East Grenville, Grenville, Great Retallack, Great Laxey, Marke Valley, Chiverton Moor, Chontales, Wheal Emily Henrietta, and a few other mines. The standard for copper ores in the sale on Thursday rose 2½ per ton. In the Times of Thursday it is said, "It is satisfactory to be able to report that the depression which has so long characterised the copper trade is rapidly passing away, and there is every prospect of a good autumn and winter trade being done." We trust this may be realised for the benefit of "One and All," and that the rise in the standard this week may be the precursor of greater advance.

West Chiverton, 60½ to 61½; in the 120 fm. level cross-cut, south of Daukes's, some good stones of lead and blende have been met with, from a branch intersected on Saturday, but the main part of the lode has not yet been cut into. The 110 west, on south lode, is worth 30½ per fathom. Batters's shaft, below the 100, is worth 50½ per fathom. Burgess's shaft, sinking below the same level, 60½ per fathom. The 110, west of Daukes's, 40½ per fathom. The 100, west of cross-cut, 26 fms. east of Batters's, 25½ per fathom. The 100, east of Batters's, 30½; 100 west, 40½; 100 west of cross-cut, 70½; 100, east of Burgess's, 30½. Chiverton Moor, 6½ to 6½; Bedford United, 32s. 6d. to 35s.; Bedford Consols, 12s. 6d. to 15s.; Drake Walls, 5s. to 7s. 6d.; East Basset, 8 to 10; East Carn Brea, 4s. 6d. to 5s. 6d.; East Caradon, 2½ to 3; Frank Mills, 32s. 6d. to 37s. 6d.; Frontino and Bolivia, 13s. to 15s. Great Laxey shares have advanced to 18, 19, and a good business done.

Prince of Wales have been in great demand, and advanced to 40s., leaving off 37s. to 39s.; the 65 east is now worth 100½ per fathom, and letting out a deal of water; the 65 west, up to cross-course, is worth 25½ per fm.; the new south lode is worth 15½ per fm.; the ore sold on Thursday realised 77½, with carriage. West Prince of Wales, 7s. 6d. to 10s.; this mine is much improving, and they seem to be in an important position. East Lovell, 6 to 6½; Great Wheal Vor, 11½ to 12½; Herodsfoot, 39 to 41. East Grenville, after reaching 3½, leave off 51s. to 53s.; the pitch in the back of the 110 west has improved to 3 tons of rich ore per fm.; the 95 end, 1½ ton; in the winze below the 75, the lode for the length of the winze is worth 6 to 7 tons of ore per fathom. Wheal Grenville, 22s. 6d. to 27s. 6d.; the 100 west is worth 12½ per fm.; the 66 west, 10½ per fm. Marke Valley, 7½ to 7½; North Crofty, 25s. to 30s.; Yudanamutana, 2½ to 3.

Chontales Gold, 2½ to 2½; the reports from the mines are the most satisfactory yet received. The remittance of gold is 397 ozs., from 759 tons of ore, the result of 18 days' working. It is stated that this remittance would have been considerably larger but for the damage done to the tramway and water-course by a sudden and heavy flood, which stopped the working of the stamps for several days. The health of the establishment is good, and Mr. Belt quite recovered. Don Pedro North del Rey, 3 to 3½; the statement issued by the directors shows a profit on seven months, from Jan. to July inclusive, of 90,425, 12s. 9d. The dividends which have been declared during the same period are 17,564, 17s. 3d., or 4s. 6d. per share. Great North Downs Mine is looking better, and the ground about Sleggan's shaft is much easier for working; Wheal Ury is still looking well; North Treskerby, 8s. to 10s.; Providence Mines, 20 to 22; Redmoor, 4s. to 6s., and in request; South Condurrow, 2s. 6d. to 5s.; South Herodsfoot, 15s. to 20s.; Tincroft, 12½ to 13; West Caradon, 2 to 2½; West Drake Walls shares in request, at 5s. to 7s. 6d. West Frances, 26 to 28; West Seton, 150½ to 157½; Wheal Emily Henrietta, 25 to 27½; Wheal Mary Ann, 17½ to 18½; Wheal Seton, 45 to 50.

The Market for Mine Shares on the Stock Exchange during the week has been active, and a large business has been done, though in several instances, from exceptional circumstances, at lower prices. St. John Del Rey shares have fallen to 18½, 19½, owing to the large loss on the month's working last reported, but which may prove exceptional. Don Pedro shares are also lower, 2½ to 2½ ex div.; Anglo-Brazilian, par to ½ prem. Chontales shares are firm, on the more favourable advices received by the last mail, and which are read as the most promising yet received; closing price, 2½ to 2½. Pestarena, ½ to ½ dis.; Rossa Grande, ½ to ½ prem.; Frontino and Bolivia, ½ to ½; United Mexican, 1½ to 2; Port Phillip, 1½ to 1½. Yudanamutana shares have fluctuated considerably, closing 2½ to 3. Vancouver Coal, 8 to 8½.—In British Mines a good business has been done in Great Laxey shares at a further advance, closing 18 to 18½ (cum div.) Chiverton Moor shares are better, at 6½ to 6½. Prince of Wales shares rose to 40s., and close 37s. to 39s.; the prospects in the bottom level are more favourably reported on. East Grenville, 50s. to 55s.; Great Vor, 11½ to 12½; West Chiverton, 60½ to 61½. Glan Alun, 12s. 6d. to 13s. 6d., 6s. call paid; the prospects of this mine are of a high order.

COAL MARKET.—The market has been only moderately supplied this week, the fresh arrivals amounting to 87 ships. All descriptions of coal have been in fair request, and we quote prices generally 3d. higher. Hetton Wallsend, 19s. 3d.; Hartlepool Wallsend, 17s. 3d.; Eden Main, 16s. 3d.; South Hartlepool, 16s. 3d.; Hetton Lyons Wallsend, 15s. 9d.; Tunstall Wallsend, 15s. 9d. Unsold, 6 cargoes: 45 ships at sea.

THE WEST SAINT IVES CONSOLIDATED TIN MINING COMPANY, with a capital of 10,000l., in shares of 1l. each, to which reference was

made in a previous Journal, has issued its prospectus. The purchase-money is fixed at 4000*l.*, of which 1600*l.* is to be in cash, and the remainder in fully paid shares. The sett is a mile in length and three-quarters of a mile wide, and it is the opinion of all practical miners that the nearer the lodes approach each other in depth the greater are the deposits of mineral.

At the Truro Ticketing, on Thursday, 3522 tons of ore were sold, realising 13,750*l.* 6*s.* 6*d.* The particulars of the sale were:—Average standard, 104*l.* 1*s.*; average produce, 6*g.*; average price per ton, 3*l.* 18*s.*; quantity of fine copper, 223 tons 7 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Aug. 20	3724	105 3 0	6 3/4	4 1 0	128 5 1/4	262 7 0
" 28	1622	97 9 0	7 1/2	4 18 0	12 5 1/2	62 7 0
Sept. 3	1669	103 6 0	7 1/2	4 2 6	12 4 1/2	61 18 6
" 10	1155	104 19 0	6 3/4	3 4 0	11 3 1/2	56 7 6
" 17	3522	104 19 0	6 3/4	3 18 0	12 4	61 11 0

Compared with last week's sale, the advance has been in the standard 2*l.*, and in the price per ton of ore about 2*s.* 9*d.* Compared with the corresponding sale of last month, the standard is about stationary.

At East Pool Mine meeting, on Monday, the accounts for June and July showed a credit balance of 983*l.* 12*s.* 10*d.* A dividend and bonus of 960*l.* (7*l.* 10*s.* per share) was declared. The committee state they "are pleased in being able to congratulate the adventurers on the realisation of the prospects anticipated in the report at the last meeting, on July 13, even without any advance since that date in the price of tin. The dividend declared to-day of 5*l.* per share, and bonus in addition of 2*l.* 10*s.*, has essentially resulted from the diminution of the merchants' bills as compared with April and May, the increased quantity of arsenic disposed of, and the beneficial advance in the price of the latter article, which is likely to be maintained."

At the Great Laxey Mining Company meeting, at Laxey (Isle of Man), on Sept. 11, the directors declared the usual quarterly dividend, of 10*s.* per share.

At Wheal Trelawny meeting, on Thursday (Mr. W. Nicholson in the chair), the accounts showed a debit balance of 1007*l.* 2*s.* 1*d.* A call of 1*l.* per share was made. Details in another column.

At Lovell Consols general meeting, on Thursday (Mr. J. Batchelor in the chair), the accounts to the end of July showed a debit balance of 334*l.* 18*s.* 9*d.* A call of 2*s.* per share was made. Capt. Chappell reported that the lode in the adit was worth 30*l.* per fathom for tin, and that every exertion should be used in driving the 12*l.* level. Details in another column.

At the Stiperstones Mining Company meeting the report of the directors congratulates the shareholders upon the encouraging appearance of the mine. The difficulties in the two engine-shafts, which have been the cause of so much delay, have been surmounted, and there is now every reason to expect that the sales of ore will steadily increase. The report of the manager (Capt. James Nancarrow) stated that on Sept. 11 there were 80 tons of ore at 11*l.* 15*s.* 6*d.* per ton, and they would soon have ready another parcel if they could have some rain. A parcel of blende was being prepared. All the machinery and surface works are in good order, and he was pleased to say that, on the whole, the mine is opening out very well.

At North Roskear meeting, on Tuesday (Mr. F. Pryor in the chair), a call of 1*l.* per share was made. The agent's report was of an encouraging character. Much dissatisfaction was expressed at the meeting by some of the oldest and largest local shareholders with the proceedings of the new London committee, who, without consulting the wishes of the adventurers at the meeting, instructed the secretary, Mr. W. Ward, of London (who was present), to appoint Messrs. Mitchell and Jenkin, of Redruth, as engineers of the mine, in place of Mr. W. Bennett, who was dismissed in the most summary manner, and without any apparent reason. This unusual procedure was resented by many present refusing to sign the cost-book.

At the Bradda Mining Company meeting, held in the Isle of Man, on Sept. 10 (Mr. G. W. Dumbell in the chair), the accounts showed a credit balance of 204*l.* 14*s.* 10*d.* The report of the directors stated that the present appearance of the mine led them to entertain a firm conviction that depth only was wanting to make it a dividend-paying property, if it continues to be pressed forward with energy. The report of the agent (Capt. Barkell) stated that his confidence is still unshaken as to the mine proving a successful and permanent undertaking. The Chairman, in moving the adoption of the reports and accounts, referred to the different points of operation, and expressed confidence in the future. Mr. P. Killey seconded the proposition, which was put and carried unanimously. Messrs. John Delaware Lewis and L. W. Adamson were re-elected directors. Mr. James Haining was re-appointed auditor. Votes of thanks were passed to Capt. Barkell and to the Chairman.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT a decrease in the "notes issued" of 215*l.*, which is represented by a corresponding decrease in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown an increase in the "public deposits" of 259,803*l.*; in the "seven day and other bills" of 39,735*l.*; and in the "reserves" of 2169*l.*; together 270,707*l.*; and a decrease in the "other deposits" of 114,190*l.*—175,508*l.*; and adding thereto 91,836*l.*, the decrease in the "other securities" on the asset side of the account, there is shown a total increase in the reverse of 270,344*l.*

ST. JOHN DEL REY MINING COMPANY.—The advices received by the last mail inform the directors that on Aug. 12 the lander on duty at surface, close to Robertson's shaft, in the East Quebra Panella section of the Bahu, saw smoke issuing from the shaft, and sent notice to the captain, who, on arrival, found there was some considerable fire adjacent to the shaft, on the east side. Active steps were at once taken to ascertain the seat of the fire, and measures adopted to suppress it and prevent it spreading, which were successfully applied, and the fire extinguished within an hour and a half from the time the issue of smoke was first noticed. The damage which has been done is quite insignificant, being only the "candea" poles, forming the covering of the stull, to the extent of 9 feet by 7 feet. Although considerable time has been given to the investigation of the cause of the fire, Mr. Gordon is at present unable to say with certainty to what it is attributable. The general gold return at Morro Velho for July is less by about 2337 oitavas than was extracted in June. The quantity of stone reduced in July is 43 tons more, having one more day for stamping, but the standard yield is 1.673 oits. for July, that for June being 2.214 oits. per ton. The Gaia return has given 21 oits. more, but the standard yield is not so good, being only 2.484 oits., as compared with 2.683 oits. obtained in June. As will be seen by the statement which appears in another column, the operations during July resulted in a loss of 1370*l.*

CHONTALES.—It is satisfactory to find that Mr. Belt has recovered from his late indisposition. Mr. Belt's reports upon the mines are the most satisfactory yet received. The remittance of gold is 397 ozs., from 750 tons of ore, the result of 18 days' working. It is stated that this remittance would have been considerably larger but for the damage done to the tramway and water-course by a sudden and heavy flood, which stopped the working of the stamps for several days. This damage has been repaired, and the stamps put in full working order. The health of the establishment continues good. The reports appear elsewhere, from which it will be seen that Mr. Belt has made great progress in preparing for 12 additional stamps at St. Domingo, and he thinks he may promise to have them at work within two months after their arrival at San Ubaldo. Mr. Belt has got most of the timber required for them in, and has 12 men at work at the excavation for them. Mr. Belt adds that all his statements with regard to large profits, as soon as sufficient stamps are erected, have been grounded on a solid basis—everything is looking most flourishing. Advices have been received from the agent at Greytown that the first portion of the stamps had been dispatched up the river.

DON PEDRO NORTH DEL REY.—The advices, published in another column, show that the profit realised during July amounts to 4318*l.*

LEAD MINING.—Of the public dividend lead mines in England and Wales nearly one-half are situated in the Principality, while they yield considerably more than one-half of the aggregate amount paid in dividends. As an evidence of the progress of public estimation in favour of lead mines as an investment, it may be remarked that in 1862 there were 13 public lead mining companies, which divided during the year 70,590*l.*; but in 1867 the number had been increased to 18, which divided 127,280*l.* The paid-up capital amounts to 468,073*l.*; the sum paid in dividends, 1,263,587*l.*; and the current aggregate market value, 1,372,657*l.*

MINING IN WALES.—Operations at the Brynswyth Mine are progressing satisfactorily, and, as will be seen by the report, which appears in another column, already "in clearing out the eastern end large lumps of lead are found, some weighing as much as 40 lbs., containing splendid lead, with a mixture of spar." Every preparation is being made, with the view of opening out the mine upon a scale commensurate with its merits.

MINING IN THE LOVELL DISTRICT.—There is now another important addition to the mines in this district, and one, too, that will, according to present appearances, prove a lasting and profitable mine. Lovell Consols, to the east of Trumpet Consols, has cut a lode in the bottom of the adit, worth 30*l.* per fathom for tin, and every exertion

is being used to get under it, by driving the 12 fathom level, which they will do in about 6 fathoms further driving. The general meeting was held on Thursday, the particulars of which appear in another column, at which a call of 2*s.* per share only was considered necessary, so that on the score of economy there is not much to be desired.

MINE ACCIDENTS.—At Wheal Bassett, Thomas Hodge, aged 19, was killed by a fall of stuff, which buried him alive.—At North Wheal Bassett, William Johns was killed by a fall in the shaft. He has left a wife and large family unprovided for.

TO MINING ENGINEERS AND METALLURGISTS.
WANTED, a Gentleman EXPERIENCED IN MINING, and preferably with a KNOWLEDGE OF COPPER SMELTING, to PROCEED AT ONCE TO COLORADO, and report on some COPPER and GOLD MINES largely worked.

He must be a gentleman of considerable experience in practical copper mining, and the management of a large mine. Three months will probably be occupied altogether. Apply immediately, stating terms, qualifications, and references fully, by post, to "W. H.," MINING JOURNAL Office, 26, Fleet-street, London.

WANTED, a SITUATION as AGENT by a PRACTICAL MINER, who has had twenty years' experience in the NORTH OF ENGLAND, twelve years of which he has acted as MANAGER. Testimonials and references can be had on application to "W. H.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, an IRON AGENCY by a LONDON HOUSE, either for the SALE OF FIG or MANUFACTURED IRON. In either case Advertisers must be sole representatives for London, and South. First-class connection amongst manufacturers and shippers. References, &c. Address, "T. F. B. and Co.," MINING JOURNAL Office, 26, Fleet-street, London.

WANTED, a Gentleman of good education, high character, and great intelligence, practically versed in the most recent PROCESSES of the MANUFACTURE OF IRON and STEEL, and thoroughly conversant with MINING OPERATIONS and the MANAGEMENT OF COLLIERIES, to CONDUCT WORKS of that nature on a large scale in the NORTH OF ENGLAND. A handsome salary will be given, and the highest references will be required. Written applications, containing references, to be made to "B.," care of Messrs. Reynell and Son, Advertising Agents, 44, Chancery-lane, London, W.C.

A THEORETICALLY WELL-EDUCATED, and PRACTICALLY THOROUGHLY EXPERIENCED MINING and METALLURGICAL ENGINEER (German by birth) is DESIROUS of a RE-ENGAGEMENT. Address, "S. R.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

IMPORTANT TO INVENTORS, ENGINEERS, AND MANUFACTURERS.—The Advertiser, who is practically acquainted with the construction of MACHINERY, and has a thorough knowledge of mechanical principles, is anxious to OBTAIN AN ENGAGEMENT, where his great experience in preparing drawings, and working out the details for original machinery, would render his services most valuable to Inventors, Engineers, and Manufacturers. References extending over many years. Apply, by letter, to "R. P.," care of Hobbs, Hart, and Co., No. 76, Chancery-lane, London, E.C.

TO COAL and IRONMASTERS, ROPE MAKERS, OIL MERCHANTS, AND OTHERS.—A GENTLEMAN of active business habits, and considerable commercial experience, with a first-class connection amongst COLLIERY OWNERS and IRONMASTERS, is open to UNDERTAKE AGENCIES for the SALE OF IRON, IRONSTONE, and all kinds of articles used at COLLIERIES and IRONWORKS. Has represented a respectable firm for upwards of 20 years. Highest references and security, if required. Address, "W. F.," Post Office, Burslem.

TO COLLIERY OWNERS, AND OTHERS.—A COLLIERY VIEWER, brought up in the NORTH OF ENGLAND, and having twenty years' subsequent experience at colleries of extent and importance in England and Wales, WISHES for an APPOINTMENT. Will undertake to devote the whole of his time to the duties of an office entrusted to him, and have the works conducted on principles of safety and economy. Testimonials may be seen at the MINING JOURNAL Office; or they will be forwarded, with references of the highest character, by addressing to "C. H.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

IRON ORE INVESTMENT TO BE DISPOSED OF.—TO BE DISPOSED OF, BY PRIVATE TREATY, either in part or the whole, VALUABLE IRON ORE WORKS, having large deposits of ore recently developed, in the MINERAL DISTRICT near WHITEHAVEN. Address, "A. B.," Post Office, Whitehaven.

IMPORTANT MINING PROPERTY FOR SALE IN RHENISH PRUSSIA.—A BLENDE MINE, giving 3 to 4 tons of blende per fathom; a COPPER MINE, averaging 14 per cent. of copper; and THREE LEAD MINES, with 65 per cent. of lead. Apply for particulars, to O. J. YOUNGHUSAND, Esq., Wiehl, Kreis Godesberg, near Cologne, Prussia.

TO CAPITALISTS.
VALUABLE COAL LEASES, METALLIFEROUS MINES, and SLATE QUARRIES, situated in ENGLAND, and NORTH and SOUTH WALES, now on hand, FOR DISPOSAL. Apply to—MESSRS. BEOR and KENRICK, Exchange Buildings, Birmingham; and at Swansea and Ruabon.

NICHOLLS, MATHEWS, AND CO., ENGINEERS, TAVISTOCK FOUNDRY, TAVISTOCK. MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK, CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK OF EVERY DESCRIPTION. ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required. Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

WILLIAMS'S PERRAN FOUNDRY COMPANY, PERRANARWORTHAL, CORNWALL. MANUFACTURERS OF STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery. London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

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STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED AND REDUCED), MANUFACTURERS OF RAILWAY CARRIAGE, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION OF RAILWAY ROLLING STOCK. OFFICES AND WORKS, HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM. LONDON OFFICE, 118, CANNON STREET, E.C.

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MESSRS. WESTON and COLLINGBORN SOLICIT ORDERS for SOFT PIG LEAD, which they are producing of the very best quality. Prices on application. WORKS, SWINFORD, GLOUCESTERSHIRE. OFFICE, 18, PETER STREET, BRISTOL.

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GREEN AND BLUE SLATE QUARRY. Within 150 yards of a railway-station, and with a main line of railway passing through the property—and within two miles of a shipping-port, accessible by the same railway to the ship's side.

The OWNER of this VALUABLE PROPERTY is OPEN to TREAT either for PARTNERSHIP or a COMPANY. In either case he desires to retain a moiety of the property. There is ample tip, the slates are of the finest colour and quality, and the working (without machinery) will be of the most inexpensive kind. The slates have been proved for a century, but the railway facilities have only been recently obtained. Apply to Mr. THOMAS HARVEY, Segontium-terrace, Carnarvon. 14th August, 1868.

Tenders for Smokeless Locomotive Steam Coal.

NORTH LONDON RAILWAY COMPANY.—The directors of the North London Railway Company are PREPARED to RECEIVE TENDERS for the SUPPLY of—THIRTY THOUSAND TONS of SMOKELESS LOCOMOTIVE STEAM COAL. The deliveries to be extended over a period of twelve months, or thereabouts, commencing on or about 1st March next. Particulars of the terms and conditions of tender can be obtained on application to the Locomotive Superintendent, at the company's works, Bow road, London, E. Tenders to be sent in on or before Twelve o'clock on the 29th of September, 1868, addressed to the Secretary at the offices of the company, Euston Station, London, N.W., marked outside "Tender for Locomotive Coal." The directors do not bind themselves to accept the lowest or any tender. By order, ROBERT S. MANSEL, Secretary. Euston Station, Euston-square, London, N.W., 11th September, 1868.

RAILWAY WAGON WORKS, BARNSELY.
MESSRS. G. W. AND T. CRAIK ARE PREPARED TO SUPPLY COAL AND COKE WAGONS OF EVERY DESCRIPTION, Either for cash, or by deferred payments through wagon-leasing companies. WAGONS PROMPTLY REPAIRED.

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HENRY HUGHES AND CO., FALCON WORKS, LOUGHBOROUGH. Have ALWAYS IN PROGRESS, and can SUPPLY at short notice, TANK ENGINES To suit any gauge of railway and gradients from 1 in 16.

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TAVISTOCK IRON WORKS.

SIR,—Having purchased these well-known and extensive premises, we take this opportunity of thanking our numerous friends and customers for the very liberal support with which we have been favoured during the past quarter of a century at the Bedford Iron Works. We now beg to inform you that our hammer and plating mills are in full operation, and that we are in a position to execute any orders for steel and iron shafts of every description, wagon and cart axles, shear moulds, and heavy shafts of all kinds, &c.—as per our list—at a short notice; these articles are being manufactured by the same workmen employed by the late firm of Messrs. GILL and Co., whose high reputation, for the quality of their shafts in particular, secured them a world-wide notoriety. We purpose giving special attention to this branch of the business, and by selecting iron from best scrap and superior steel, as well as workmanship, we shall endeavour to maintain that fame for the durability and superiority of these shafts already so well known. Fire shafts for gas works and engine stokers, &c.

We would also direct your notice to the list of our cast steel mining tools, which are coming into general use, and are giving great satisfaction both at home and abroad. We also beg to announce to gold mining companies that we have given great attention to this branch of machinery, supplied foreign mines largely, and are prepared to supply estimates for the same on application, and engineers can be sent for erecting, if required, to all parts of the world. Your kind favours will at all times receive our best attention; and, with our increased facilities, we are now in a position to execute all orders entrusted to our care with promptness and dispatch.

We are, yours obediently, TAVISTOCK, September, 1868. NICHOLLS, MATHEWS, AND CO.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 9	Prince Arthur	23	£13 17 6	Trefry's Executors.
"	ditto	9	10 10 6	ditto
"	Great Laxey	100	22 16 6	Burby Port Company.
"	Stiperstones	40	11 15 6	Walker, Parker, & Co.
"	ditto	40	11 15 6	Adam Eytton.
"	Foxdale	100	23 15 0	Panther Lead Co.

COPPER ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 15	Parys Mines	150	£4 15 6	J. Key and Son.

BLACK TIN.				
Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.
Sept. 12	Wheal Uny	11 16 2 0	£54 0 10	£639 1 0—Boltho.
"	Killy St. Agnes	5 17 1 25	53 15 0	315 14 2—Calenick Co.

COPPER ORES.
Sampled Sept. 2, and sold at the Royal Hotel, Truro, Sept. 17.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols.	130	£4 10 0	Crelake	50	£2 14 0
ditto	129	4 2 6	ditto	49	2 16 0
ditto	125	4 6 0	East Caradon	72	4 14 0
ditto	124	4 17 0	ditto	70	4 3 6
ditto	121	4 11 6	ditto	43	1 7 6
ditto	119	4 12 0	West Maria & Fortes.	70	3 1 6
ditto	110	4 11 6	ditto	69	5 2 6
ditto	109	4 16 6	ditto	51	2 17 6
ditto	102	4 14 6	Bedford United.	70	2 11 0
ditto	85	3 5 0	ditto	50	2 19 6
ditto	82	5 6 0	ditto	40	2 18 6
ditto	79	2 7 6	Wheal Friendship	72	1 10 6
ditto	76	4 15 0	ditto	60	5 3 0
ditto	73	1 15 6	Prince of Wales	45	5 19 6
ditto	55	1 17 0	ditto	41	6 11 0
ditto	54	3 11 0	ditto	34	6 1 0
ditto	51	2 15 0	Gunnislake (Clitters).	51	4 14 6
ditto	32	13 0 0	ditto	49	2 16 6
ditto	25	1 4 0	Devon and Cornwall.	59	3 11 6
ditto	17	0 17 6	ditto	51	3 11 6
ditto	6	4 14 0	East Russell	39	2 13 6
Marke Valley	100	2 5 6	ditto	51	5 0 6
ditto	89	2 6 6	Wheal Emma	39	1 16 0
ditto	81	6 0 6	New East Russell	38	3 19 6
ditto	61	5 9 6	Old Gunnislake	27	3 11 6
ditto	50	2 5 0	Belstone	25	1 19 6
ditto	41	1 11 0	Collacombe	7	2 2 6
Crelake	66	2 19 6	ditto	5	9 9 0
ditto	58	4 15 0			

TOTAL PRODUCE.									
Devon Great Con.	1704	£7179 19 0	Gunnislake, &c.	95	£ 466 9 6				
Marke Valley	423	1432 9 6	Devon & Cornwall	90	277 10 0				
Crelake	223	744 1 0	East Wh. Russell	70	260 2 0				
East Caradon	185	689 15 6	Wheal Emma	39	70 4 0				
West Maria, &c.	180	664 5 0	New East Russell	38	151 1 0				
Bedford United	160	444 5 0	Old Gunnislake	27	95 10 6				
Wh. Friendship	132	418 16 0	Belstone	25	49 7 6				
Prince of Wales	120	748 2 6	Collacombe	12	62 2 6				
Average standard	104 19 0	£104 19 0	Average produce	3522	£3 18 0				
Average price per ton			Quantity of fine copper	223 tons 7 cwt.					
Quantity of ore	3522 tons	£13,750 6 6	Amount of money						
Quantity of ore	3522 tons	£104 19 0	Average produce		£5 1/2				
Standard of corresponding sale last month	105 3 0	Produce, 6 3/4							

COMPANIES BY WHOM THE ORES WERE PURCHASED.			
Names.	Tons.	Amount.	
Vivian and Sons	639½	£2396	7 3
Freeman and Co.	302	1130	12 6
Grenfell and Sons	298	1173	17 0
Sims, Williams, and Co.	406½	1080	19 9
Williams, Foster, and Co.	637½	2760	14 9
Mason and Elkington	163	279	0 6
Copper Mines' Company	338	1651	9 6
Charles Lambert	141	653	19 0
Newton, Keates, & Co.	141	653	19 0
Sweetland, Tuttle, and Co.	253½	908	8 3
Total	5592	£13,750	0 6

F. N. GISBORNE'S PATENT MECHANICAL BALANCE-WEIGHT SIGNALS FOR MINES, &c.

THESE SIGNALS supply a want long felt in giving INSTANT COMMUNICATION in MINES at SEVERAL PLACES at the SAME TIME without the aid of electricity, but by a single rod or chain; so that a degree of safety is ensured hitherto unknown. The price is also very low, and the mechanism so simple that any ordinary mechanic could put it in order if out of adjustment. The same patent, as applied to ships, has received the approval of the Chief Engineer, Chatham Dockyard (vide Times, Aug. 13, 1868).

SOLE AGENT FOR MINERS:
MR. GEORGE B. JERRAM, ENGINEER, 5, GREAT QUEEN STREET, WESTMINSTER.
N.B.—Mr. JERRAM is now visiting the different mines with working models.

A LARGE AMOUNT OF MONEY being EXPENDED in ADVERTISING in WORTHLESS PUBLICATIONS, C. H. MAY will be HAPPY to AFFORD INFORMATION to ADVERTISERS in the SELECTION of the BEST and MOST INFLUENTIAL.

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With SPECIFICATIONS for LABOUR and MATERIALS, CONTRACTORS' PLANS and TOOLS, with RULES and EXAMPLES for the CONSTRUCTION of PUBLIC WORKS at home and abroad. Illustrated with plates and woodcuts.

By W. DAVIS HASKOLL, C.E.
To which is added THE LAW OF CONTRACTS, by W. CUNNINGHAM GLEN, Esq., Barrister.
London: ATCHLEY and Co., Engineering, Scientific, and Architectural Publishers, 106, Great Russell-street, W.C.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

COAL—SLATE—NOVELTY.—The readers of the Journal have been lately furnished with a novel kind of rule for computing the value of mineral properties. When I have the time, I shall ask to trespass on your space by commenting on some of the questionable notions so freely advanced, evidently by a would-be "wise, profound, and practical reasoner." His system of valuation is certainly of an extraordinary character. I presume that all who move in promotion circles, and having quarries for sale, would be pleased to find buyers who are blind enough to do business upon the principle advocated in the correspondence in question. A vote of gratitude will, doubtless, be forthcoming from some parties interested.—CAPITAL.

THE VALUE OF COAL PROPERTIES.—I shall be most happy to treat with any person, or gentleman of means, who is in quest of a coal speculation, upon the terms set forth in a letter which appeared in last week's Journal, signed Samuel Jenkins. Certainly your correspondent feels a keen regard for his colliery proprietors, and I wish him every success.—A LARGE COLLIERY PROPRIETOR: London.

MINERAL PROPERTIES—THEIR VALUE.—In No. VIII. of my series, in last week's Journal, you make me say that Messrs. Casson and Co. bought the Duffry Quarry for 120,000l., while it was Messrs. Casson and Co. that sold it for that sum.—SAMUEL JENKINS.

FOREST OF DEAN.—"Enquirer" should obtain the Rev. Mr. Nicholls's "Iron Making in the Olden Times, as Illustrated in the Ancient Mines, Forges, and Furnaces of the Forest of Dean." The work is published by Mr. C. C. Hough, of Coleford.

DON PEDRO NORTH DEL REY.—Through an inadvertence, I regret to find it stated in my remarks in last week's Journal that purchasers of Don Pedro shares would be entitled to the dividend up to Sept. 30. It should have been up to Sept. 16 only. I may here state that my only motive in mentioning the subject of dividend at all was to advise the public of what very many probably were not aware—that the shares would not be dealt in ex dividend until after the fortnightly settlement, which occurred on Sept. 16.—EDWARD COOKE: Old Broad-street, City.

SCALE FOR ADVERTISEMENTS.—To avoid the necessity of frequent application, we may state our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, twelve words per line.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, SEPTEMBER 19, 1868.

THE IRON TRADE.

It takes a long time to teach some men the lesson implied in the familiar aphorism—"Let well alone." If the proverb had been acted upon we should have had no "Black Friday," with all its distressing results; nor should we have had many of the labour disputes that have occurred, and wrought poverty and suffering in the poor man's household. However much ironmasters, in the recollection of the recent past, may be disposed to adopt the punning motto of the ONSLOW family, and "make haste slowly," their operatives are not so inclined, even though the remembrance of the recent past may in their case, too, be acute. The reports which we have now for some few weeks past published from our correspondents in the different centres of the iron industry of the United Kingdom have all shown the setting in of an improved demand for iron of all kinds, with a consequent increase of work. For a very long time previously the reports from the same centres were of an altogether opposite character. They showed that extremely little work was being done; and that to secure even that little very low prices had to be accepted. There was, therefore, a great void to be filled up before a condition of average prosperity could be said to have set in; machinery, which had been kept standing, not only unproductive, but also a source of loss to its owner, had to be again laid under contribution; and above all, prices had greatly to improve—all before it could be asserted that we had fairly embarked upon a prosperous tide.

That happy state of things has not yet arrived. It is only in rare instances in any one of the ironmaking districts that the full productive power has been again employed, and in rarer still where prices have been brought up to the current orthodox standard—that standard upon which the prevailing rate of workmen's wages has been fixed. Yet the protracted depression has hardly begun to disappear, and a state of prosperity scarcely commenced to loom, than some evil, unexpected genius, by whom the men seem to be constantly haunted, would appear to be again prompting them to acts of folly which, if they should be carried out in their entirety, would assuredly throw masters and men back into the slough from which they seem now to have a prospect of extricating themselves. Last week a circular was issued to the men in different parts of the kingdom, setting forth that at a meeting which was held in the North, it was resolved "that a deputation from each work wait upon their employers on Monday, the 14th inst., and ask for an advance of 1s. per ton on puddling, and 10 per cent. on mill-work." Acting upon that document, there have been cases in which workmen waited upon their employers on Monday last. It is hardly necessary to say what was the result of the interviews. Of course, the masters were not able to comply with the request of the men. Indeed, some of the latter had themselves so little expectation of a rise being granted that, instead of asking for it in so many words, they simply enquired if there were any probability of an advance being given? The masters, even in these cases, said that there was not. The persons at whose instance the movement is commenced were all aware that next week the Preliminary Meetings of the Ironmasters will begin, and this juncture has, doubtless, been chosen that the proceedings of those meetings may be influenced by what the men desire. It was to the probable action to be taken by the masters on those occasions that the enquiries of the men had reference when they asked if it were probable that there would be an advance.

The character of the interviews will enable the deputations to re-

port to their fellows at representative meetings, suggested in the circular before described, that there is no probability whatever of any change being declared in the price of finished iron at the preliminary and quarterly meetings. The first will come off in Birmingham next Thursday, to be followed by the northern meeting, which will be held in Newcastle on the succeeding Tuesday. Afterwards will come the North Staffordshire meeting at Stoke. We venture to assert that even before the first meeting is held there will be less activity at the works than there is now, and that by the time the quarterly meetings commence, a fortnight afterwards, the quieter aspect of affairs will be even more marked. At that date all means of getting iron and steel by the ordinary routes into Russia and Canada will have terminated for the season. In the making of iron to supply the markets in those parts of the world, the works in England (north and south), and in Wales and Scotland, have been for the most part employed in every case in which there has been a brisk trade done. Whatever specifications remain on the books for those markets three weeks hence will be cancelled. To prevent the list of cancelled orders being more than the smallest reasonable minimum, the full power of works has been strained, and with a fair amount of success. In less than another week from this date the last sailing vessel for this season will have weighed anchor, and very little will after that be sent out. In any pressing case, however, there will be the chance of the steamers for another fortnight; but, inasmuch as transit by that means represents an additional 10s. a ton on the iron, it is improbable that much will be sent out per packet. During the past three weeks telegrams have reached the works in rapid succession, urging the ironmasters to press forward the execution of the orders entrusted to them, and to dispatch the goods by certain vessels named, so as to prevent the loss of the orders. The houses concerned have been able to send away the bulk, and already the quantity *in transitu* to the ports has begun sensibly to decrease.

The Russian demand is attributable chiefly to the great impetus recently given to railway work by the CZAR'S Government. With the rails and their fastenings there have also gone out more than the customary quantity of sheet-iron for roofing, and also of the general descriptions of merchant iron and of machinery. The Canadian demand, there is some reason to conclude, is larger than would have been the case if the duties upon iron imported into the United States had not been so heavy as they are. It has been for some time remarked throughout the iron trade centres that the United States' orders have not been of so much worth as it was expected they would be at this date after the recent internecine strife. Instead of the iron and steel products bought by the States from this country increasing as the period since that struggle lengthens, it decreases. It has been shown that the value of the iron and steel, and the manufactures of those metals imported into the United States in the first five months of this year was only \$7,454,000, against \$10,729,000 in the corresponding period. Some portion of this diminution may be traceable to a reduction in price, but certainly not much of it. It is true that the Americans are increasing their productive capability, but the comparatively small quantity of iron and steel which they have been turning out in the same time is not a sufficient explanation. There is some reason to conclude that, as the United States' officers have for some time shrewdly suspected, the Canadians have been able to assist consumers in the States. Before the season now closing began there were fears that the Canadian trade would be very limited in extent, but it has turned out that we have had one of the best seasons with Canada for iron that has fallen to our lot for some few years past. This is the more significant because we have information that for domestic use Canadian stores were previously well supplied.

These particulars of the chief trade being done we have sketched, in order that the men may know how matters stand. They will have perceived that just now the apparent return of prosperity is exceptional. It is impossible for any man connected with the trade, whether as a master or a workman, whether as a merchant or a consumer, to forecast at the ensuing meetings of the trade what will be its condition even six weeks hence. The probability is, as we have intimated, that it will then be much less satisfactory than it is now, for although there is a slight increase in the demand on home and also East Indian account, that demand will be altogether insufficient to make up for the closing of the season ports. No improvement can, consequently, be brought about in prices, and there will be less demand for labour. Still, even then, business will be much better than it was a quarter ago, and if it should not be checked by any misdirected action on the part of the men the improvement will gradually become more developed. The excellent harvest, with its consequent diminution in the price of food; the return of confidence, with its increased disposition to engage in business, and the impatience of money-owners to employ their property with more profit than is now attending its investment, will all contribute to the state of things which will, it is hoped, soon justify a declared advance upon the existing low price of iron, and necessarily low scale of wages. Immediately that that time arrives the ironmasters will only be too ready to avail themselves of it; and they have never yet increased the price of iron without at the same time advancing wages. But—and the men should bear it in mind—ironmasters have reduced prices without at the same time reducing wages. In the interest alike of men and masters, we trust that the men will leave well alone, and not spoil the prospects which are before them by an undue haste to secure that which they are sure to get if they will only exercise a little patience. If they now grasp at the shadow they will most certainly lose the substance.

TRADE LEGISLATION IN THE NEW PARLIAMENT.

In purely party and political circles there is now much anxiety to prevent any constituency from having the opportunity of returning a Conservative or a Liberal member, as the case may be. Each party is working with vigour to secure the majority in the great division of December. We would it could be said of the trading classes—and of those in particular upon whom the country is dependent for its minerals and its metals—that they are taking a leaf out of the book of the politicians, and resolving that there shall be no trading constituency which shall not have the opportunity of returning a trade member. Men who are now reviewing the constituencies in different parts of the kingdom upon purely political grounds express their astonishment that so little is being, or has been, done to this end by the mercantile classes. "Strange to say (wrote one of these in an influential daily contemporary a few days back) the mineral interest of Cornwall is not represented in the House of Commons," and strange indeed the assertion will sound in the ears of all who were not previously familiar with the fact. Yet so it is. The nearest approach to a satisfactory alteration is that which has begun in East Cornwall, where Mr. BRYDGES WILLYAMS, a member of the great copper smelting firm of SIMS, WILLYAMS, and Co., London, is put forward with Sir JOHN TRELAHNEY. We wish Mr. WILLYAMS every success, and rejoice to learn that his return may be considered certain. But is Mr. WILLYAMS to be the only one of the 14 members which Cornwall has now a right to send up who can be regarded as having even the comparatively remote trading connection with the mining interests of Cornwall which his vocation implies? If it be so, then the mining interests of the other parts of the kingdom may well employ the Cornishman's historic enquiry, and ask "the reason why."

But Cornwall is not the only mining county in Great Britain in which apathy and inertness is being evinced, at a time when all should be sensitiveness and activity. The readers of this Journal have been made aware of the claims of the trade candidates already in the field in certain parts of the United Kingdom; and intimation has been given of the necessity there is, even out of Cornwall, for the extension of the list. We again appeal to the constituencies to put forth the requisite effort. They may depend upon it that if the right men are not nominated others will be brought forward at the last moment, whose success will have to be deplored. We must have men who are sound upon the labour question. The paramount importance of this subject to the mining and metal interests of Great Britain—aye, and to the world—is admitted by every man who occupies the position of an employer in either department. Still, as a rule, he is doing comparatively little to secure the return of men who are sound upon the point. The importance of the subject is seen by the candidates themselves very clearly; but their ability to grasp it with the mental

vigour resulting from a practical conviction of what is necessary is not so apparent.

Amongst these Mr. LANCASTER, who is one of the candidates for Wigan, must not be classed. We need hardly say that that gentleman is at the head of the Wigan Coal and Iron Company, who are trading with a capital of 1,600,000l. Nor need we remind the readers of the *Mining Journal* that against that company chiefly was directed the three months' strike, by upwards of 20,000 miners. Such a man may well be believed to have formed a pretty decided opinion upon the subject. That opinion Mr. LANCASTER has formed, and he is so impressed with the vast interests involved in its solution, that he has determined, if he should be returned to Parliament, to devote himself to it. The remedy he proposes is the natural one, and that which alone can prove satisfactory and lasting—that the relations between masters and workmen shall be placed upon a sound and simple basis, universally recognised. This he is convinced can only be done by restoring that directness of contact and communication between the employers and the employed which in the rapid development of trade in this country has been thrust aside, and temporarily lost. A man entertaining these views, based upon conviction, resulting from actual experience, and possessing Mr. LANCASTER'S ability and energy, will be of the utmost value in Parliament.

Similar views were expressed before the Trades Union Commissioners by Mr. ABRAM S. HEWITT, the United States Commissioner to the Paris Exposition. Our legislation upon the subject will, therefore, assume vast significance; and the necessity for men of experience in the matter, as all iron and coal masters must be engaged in its adjustment, becomes increasingly manifest every day. Of this no better proof can be given than the tone of the debates at the Brussels International Congress of Workmen, where it was laid down that "strikes are the means of completely emancipating the working man."

MINERAL WEALTH OF NORTHAMPTONSHIRE.

In the history of the mining industry of this kingdom there is scarcely anything more surprising than the rapidity with which the Northamptonshire ironstone field has been developed, notwithstanding the many adverse opinions as to success with which the first promoters were favoured. On comparatively barren spots, as well as on the cultivated land, for a distance of from 50 to 60 miles, commencing on the borders of Leicestershire, and proceeding along the Midland route to its junction with the London and North-Western at Wellingborough, the brown stone was found close to the surface. Still farther on, through the town of Northampton, and branching out of it in all directions, to Duston, Weedon, Gayton, and Blisworth, the ore was found in abundance. Indeed, the resources of the county are at present far from being defined, and it will be for future chroniclers to give something approaching accurate information as to the extent of the valuable beds of ironstone, of which at present a comparatively insignificant portion is being worked, although producing about 500,000 tons of ore per annum, and standing sixth on the list of ore-producing counties. Seeing that many of the old districts, on which dependence was formerly placed for the material for making iron, are gradually becoming exhausted, Northamptonshire is evidently destined to become one of the principal centres of the iron trade in the kingdom. Its importance will also be increased when the best and most economical modes of treating the brown ores of the county become thoroughly known, which is admittedly not the case at present.

On visiting the district during the last few days, we were not a little surprised to find a number of puddling-furnaces at work in the town of Northampton itself, although in the usual channels of information, as well as in the Annual Mineral Statistics published at the instance of Government, no mention is made of them. The firm at which they were at work was that of Messrs. STENSON and Co., and who produce a very good description of steel-iron from a mixture of scrap and native pig—a considerable quantity of what is made going to the extensive agricultural implement works at Bedford, belonging to the Messrs. HOWARD. Not far from the works of Messrs. STENSON is the hamlet of Duston, from which there is a tram-line to the London and North-Western Railway, and where there are extensive cuttings, from which a good deal of ore is obtained, the quantity for 1868 being upwards of 132,000 tons. Two or three miles farther on is the Heyford Company's works, where there are three furnaces built, but seldom, we believe, is there more than one in blast all the year. A considerable portion of the stone used comes from Gayton and Blisworth, where there is a station on the London and North-Western Railway, by which a good deal of the ore from the two places named is forwarded into Staffordshire and Wales.

At the extreme end of the county, on the Midland system, some extensive fields of ironstone are being worked to advantage, whilst others are being opened out. On the Holt Hall estate, in Leicestershire, ore is being raised, whilst the site for four blast-furnaces has been laid out, and ample and suitable space for rolling-mills in their vicinity have been left. Good stone is also being raised in the neighbourhood of Kettering, and on the estate of General ARBUTHNOT and others, whilst amongst other owners may be named the Chancellor of the Exchequer and the Hon. Mr. STOPFORD, whose ground has but recently been broken. At Glendon, Irthlingborough, and Wellingborough, however, may be said to be the principal works in the county, so far as raising ore, and converting it into iron. The Glendon Company have now two furnaces in blast, and appear to have got successfully to work, having the advantage of direct railway communication from the furnaces. At Wellingborough Messrs. BUTLIN have two furnaces, but only one in blast. At their new works at Irthlingborough, situate close to the Midland and the London and North-Western Railways, there is one furnace in blast, and another all but finished, while there is the site of two more marked out. Those works are now the most extensive in the county, and are of a truly model character, having been erected by Mr. W. BUTLIN, from his own plans. They are well situate, every appliance having been adopted calculated to economise labour, space, and fuel, whilst the machinery embraces all recent improvements. Mr. W. BUTLIN, who is a thoroughly practical man, has devoted a good deal of time to the carrying out of various experiments for the production of a superior quality of iron, and there is every reason to believe that his ultimate success will be equal to that of the North Country makers, to which we shall shortly allude hereafter. With regard, then, to the ironstone of Wellingborough, some of the fields through which we passed contained ore of a rich character, and must have yielded 50 per cent. of iron—far above the average at which it has generally been rated. In proof of this, we are enabled to give the result of the week's work of one of the furnaces whilst we were there, and which we presume is not far off the average. Leaving out the details, we may state that from 340 tons of stone, with 100 tons of limestone, there was produced 141 tons 10 cwt. of iron long weight, or 151 tons 10 cwt. short weight, showing a yield of 44.58 per cent. of good iron, being only exceeded in richness, we believe, by the hematites of Lancashire and Gloucestershire. With such a quality of stone, therefore, Mr. BUTLIN, from calculations which he has made, is of opinion that he could supply even the famed Cleveland district with stone cheaper than it can be raised there. The Wellingborough ore, he considers, he could deliver at the seat of the principal iron works at about 10s. per ton, and considering its greater fusibility and larger percentage of iron, those two advantages would more than counterbalance the extra charge caused by carriage—that is, presuming that the Yorkshire stone, at 4s. 6d. per ton, took 3½ tons to produce 1 ton of iron, the Northamptonshire stone producing on the average 42 per cent. of iron. In the present condition of the iron and steel manufacture the above facts, we have no doubt, will be duly weighed and considered.

One important branch of the iron trade may be said just now to be in a state of transition, for great efforts are being made, particularly in the Cleveland district, to produce a quality of steel suitable for rails in particular from the native ore, and so far with considerable success. Already several patents have been taken out for the conversion of pig into steel, amongst others by Mr. J. GJERS, and Mr. JONES, of Middlesbrough. The great object to be obtained in the first instance appears to be in removing the phosphorus from the pig, of which that made in Yorkshire contains a large proportion. Now, as the Northamptonshire ore contains less phosphorus than the Cleveland, there appears to be no reason why a very good steel

could not be produced from the former, and at a price which would command a very large sale indeed, considering the high price of Bessemer, owing, in a great measure, to the high royalty paid to the patentee. We understand that Mr. BUTLIN is directing his attention in the same direction as the gentlemen above named, so that the solution of a most important and valuable matter connected with the iron and steel trade of the kingdom is in a fair way of being arrived at. The actual value of such an invention can scarcely be estimated, but for rails in particular, as well as for other purposes, it would doubtless supersede the high-priced Bessemer. However, the introduction of such a successful process of conversion, from whatever quarter it may emanate, cannot but beneficially affect the iron manufacture of Northamptonshire, and which at present is but in its infancy. It is not, however, likely to remain so, for already new works and furnaces are about to be opened out, and which in course of a few years will change the present quiet agricultural district, from Wellingborough to Kettering and Market Harborough, into a gigantic hive of industry, the fires from numerous furnaces strangely contrasting with the existing pursuits of the sparse community. That change, indeed, may be said to have already commenced, for at the present time Messrs. HIPPINS and SONS, of the Swan Village Works, West Bromwich, are erecting some works close to those of Messrs. BUTLIN, and which are to be called the "Wellingborough Bar Iron Company." Portions of the plant and machinery are already on the ground, so that not only puddling-furnaces but rolling mills will soon be at work, largely increasing the consumption of the local iron. Not very far from the same place are the works of the Messrs. WILLIAMSON and CO., and who, during a comparatively short time have manufactured upwards of 12,000 tons of railway chairs from the Wellingborough iron.

One of the great advantages connected with the Northamptonshire ore is that it is obtained close to the surface, from 12 to 16 ft. thick, and in some instances giving upwards of 12,000 tons to the acre. Although it may be said that up to a somewhat recent period the ore of Northamptonshire has not been appreciated to the extent that it deserved, its value has of late been generally recognised, and it is now making rapid progress in the estimation of the iron makers in various parts of the kingdom. Such being the case, and from the energy and research of those interested in increasing the value of the mineral products of the county, there is evidently a glorious future in store for Northamptonshire, so far as relates to its iron and ironstone.

The Midland Railway will also be essentially benefited by the extension of the iron trade, and its traffic in the course of a short time will be very sensibly increased, more particularly to the North, where at present a very large quantity of the ore is forwarded, and from which, in return, the coal and coke necessary for smelting is sent.

THE EDUCATION OF OUR MINING POPULATION.

For many years past endeavours on the part of the Legislature and the owners of mines have been directed to the educating of those engaged in mining operations, but their efforts have been anything but successful so far. The last attempt in that direction was introduced in the Act 23 and 24 Vic., c. 151, which recites that after July 1, 1861, a boy above 10 years of age and under 12 can only be employed in a mine conditionally on the owner receiving a certificate from a competent schoolmaster that such boy could read and write, or that he had attended school for not less than three hours for two days in every week. At first the Act was tolerably well complied with, but for several years past in most colliery districts it has become a dead letter. Following in the same spirit, owners of mines have sought, by the establishing of schools and reading-rooms, to instruct their workpeople, but their success has been anything, as a rule, but encouraging. It is, however, gratifying to find, notwithstanding the comparative failure of legislative enactments and the exertions of owners of mines, that a new power, which gives every promise of success in promoting the intellectual status of our colliery population, has started somewhat unexpectedly into existence. The power to which we allude is that of the working colliers themselves. For the carrying out of such a very important object, we may state that on Monday last there was a large and influential gathering of the men at present employed at the unfortunate Oaks Colliery, and the widows and children of many of those at present entombed in the workings, for the purpose of inaugurating a movement, having for its object the establishment of a night-school, library, and reading-room, for the benefit of the adults and boys connected with the pit, as well as for those who have some claim through their connection with those who lost their lives by the explosion of 1866.

In opening the proceedings Mr. MINTO, the manager, said the movement was entirely initiated by the stewards and workmen, who, as a commencement, subscribed no less than 211. amongst them. It was stated by Mr. MINTO and others that, for a great number of years, so high was the character of the Oaks workmen throughout the district that all measures in connection with the colliery body—not even excepting strikes—and having for their object the bettering of the condition of the miners generally, had their starting point through them; and whatever course they pursued was sure to be followed at nearly all the other collieries in the South Yorkshire district. Such being the case, there is every reason to believe that the new educational movement will spread far and wide, and take root, not only in Yorkshire but in many other mining districts throughout the country. It is a fact worthy of notice that the want of education is now fully impressed on the better class of our mining population, who find that in consequence of their deficiency they have been kept from rising, and occupying situations which are often filled by those having infinitely less practical knowledge than themselves.

One of the speakers at the meeting on Monday, Mr. BARMBY, a North Country bottom steward, dwelt in truly pathetic terms on the loss he and others had experienced when young from the want of the means of education. Thirty years ago, he remarked, there was very little chance of education for the collier boys, most of whom, like himself, were sent into the pit when little more than seven years of age, and who had to depend on what little learning they obtained at the Sunday School. All that, he said, was now changed, and the great object at present was to give every opportunity to lads to become good scholars and efficient workmen. Mr. BARMBY, we may say, is not alone in feeling the want of what is now so freely offered to all classes. There are men in the South Yorkshire district, like Mr. WILSON, the able and intelligent viewer of Darfield Main, who have by self-culture and self-denial raised themselves from the lowest to the highest position which any man can attain in connection with our collieries. It may be true that many of those men could not pass an ordinary Government competitive examination with success, but for practical knowledge of mining, and all that related to it, their opinion would be taken far before that of those who depended on education and limited experience alone, and who it was now the fashion to promote to governmental offices. Another of the speakers in his speech noticed the career of the late Mr. JOSEPH LOCKE, the eminent engineer, who was a companion of his at the time when they drove their carts together laden with coal through the streets of Barnsley. In after life, when both had attained prominent positions, Mr. LOCKE, he said, had told him that he traced his success in his profession to his having thoroughly mastered the science of numbers. As Barnsley claimed that gentleman as a townsman, the speaker urged with great force on those present to endeavour to imitate his example by education and self-culture, and the acquiring of a taste for more ennobling pursuits than the colliery body was generally credited with.

We believe that the movement thus initiated by the working class for educating their children and improving themselves will be looked forward to with considerable interest; and, as the Colliers' Union in South Yorkshire now numbers between 9000 and 10,000 members, the establishment of schools, reading-rooms, and libraries cannot but become more general than they are. Indeed, it may be said that there are some branches of education, such as the nature of gases, &c., which ought to be well understood by all persons working in mines, and a knowledge of which it is not too much to say might have been the means of preventing many serious and fatal accidents. In common with all others interested in mining and the safety and social progress of our mining population, we heartily wish the movement "God speed," and trust that the example of self-reliance exhibited by the workmen

at the Oaks Colliery will be successfully followed by other localities, to the present and future advantage of the working collier and his children, feeling assured that colliery owners will only be too glad to assist in every way they can in aiding such a noble work.

ON A NEW SYSTEM OF IRON AND STEEL-MAKING.

BY G. J. AND T. C. HINDE.

A great and rapid increase in the quantity of iron made per furnace has characterised the pig-iron manufacture of late years. The blast-engines have become more powerful, the hot-air apparatus more efficient, and the cubic capacity of the furnaces has been greatly enlarged. Standing on the top of one of the huge furnaces at Ferry Hill, 105 ft. in height, and turning out its 400 to 500 tons of pig-iron weekly, one can hardly help thinking that the limit of progress in respect of quantity has been reached. But has the science of the subject kept pace with the mechanical means employed? Can the blast-furnace manager pronounce with certainty what will be the product from any given mixture of ore, flux, and fuel; or is he still dependent on an actual trial in the furnace, making the best guess he can, and altering his proportions when he sees by the resulting iron and cinder that his previous quantities were not adapted to produce the desired quality of iron; and is the quality of pig-iron now made better than the ironmaster of 30 years ago would have produced from a similar sample of ores? Unfortunately, there is but one answer to these questions. The pig-iron of to-day, to say the least, is not better than that of 30 years ago, and the furnace manager has still to make the best guess he can, until he sees the results of his proportions some 36 hours afterwards, and then reaching the desired point after a more or less unlucky series of adjustments. The mere existence of such a state of things as this is a great obstacle to any scientific progress. So long as the furnace manager can only produce any specific quality of iron by a series of actual trials, so long is he under the heaviest inducements, when he has succeeded in getting his furnace to the desired point, to keep it there, and to oppose any trials, experiments, or investigations which might either really result in altering the working of his furnace, or which he may imagine to have that tendency. Few of our readers outside the trade itself will be prepared to hear that a great industry of the country is carried on on such an unsatisfactory basis. Nevertheless, our description is strictly correct, and admits neither of contradiction nor exception.

The making of pig-iron from the blast-furnace is a huge chemical operation, the theory or rationale of which is but little understood; indeed, it is absolutely impossible that it should be understood by anyone not having a pretty good knowledge of metallurgical chemistry. It is to the want of this knowledge we attribute the little progress which the science of pig-iron making has made, in contrast with the immense strides which have distinguished the more mechanical departments of the business. The processes to be accomplished in the blast-furnace are these—the oxygen of the iron ore has to be removed, leaving the metallic iron; the metallic iron thus resulting from the removal of the oxygen from the oxide of iron, has to be alloyed with a certain proportion of carbon, to render it fusible, pure metallic iron being practically infusible; the earthy matter associated with the oxide of iron in the ore has to be brought in contact with some other material, with which it will readily combine at a high temperature, thus forming a fusible cinder or slag. The separations and combinations to be effected in the production of pig-iron are then as follow:—1, the separation of the oxygen from the oxide of iron; 2, the combination of carbon with metallic iron; 3, the combination of the earthy matter associated with the ore with an appropriate flux, by which both become fusible. We will now examine in detail how each of these separate operations is effected, with a view to show what are the defects in the means employed, and endeavour to point out the methods by which those defects may be remedied. Firstly, as to the separation of the oxygen from the oxide of iron, the iron ore is generally charged into the furnace in lumps, just as it comes from the mine or the calcining kiln, no great regard being paid to the size, unless there happen to be some exceptionally large pieces, in which case they are usually roughly broken up with a sledge hammer. No chemical action, of course, takes place upon the iron ore until it has become sufficiently heated for its oxygen to combine with the carbonic oxide formed in the furnace from the carbon of the fuel and the oxygen of the blast. In the upper portion of the blast-furnace this carbonic oxide is largely mixed with carbonic acid, partly given off by the limestone and partly by the union of the oxygen of the iron ore with that portion of carbonic oxide by which the reduction of the iron ore is effected. This neutralising, or, indeed, antagonistic influence of the carbonic acid, is overcome by passing a large surplus of carbonic oxide through the furnace, and which, escaping at the top, forms the so-called waste gas, now commonly utilised under the boilers, or in the hot-air apparatus. This necessity of passing a quantity of carbonic oxide through the upper portion of the furnace largely in excess of the quantity which can actually combine with the oxygen of the iron ore, is accompanied with a large extra consumption of fuel. This loss of fuel in the present method being attributable to the unsuitability of a mixture of carbonic acid and carbonic oxide gases for the reduction of the ore, we arrive at our first condition of the true method of separating the oxygen from the oxide of iron—that it must be effected in an atmosphere of carbonic oxide only, and not of a mixture of carbonic acid and carbonic oxide. We have not alluded to the nitrogen gas, it being a necessary constituent of atmospheric air; it is, of course, present wherever combustion is carried on by means of atmospheric air, and is believed not to exercise any direct influence in the blast-furnace. As the separation of the oxygen from the oxide of iron has to be effected by the union of heated carbonic oxide with the oxygen of the ore, the next point for consideration is, under what conditions can we expose the iron ore to the action of the carbonic oxide so as to ensure the maximum amount of effect from that carbonic oxide—or, in other words, so as to effect the reduction of the iron ore with the least amount of fuel? In existing blast-furnaces the descending column of iron ore is met by the ascending column of gases, and is acted upon by the carbonic oxide, more or less rapidly, in proportion to the greater or less temperature of the carbonic oxide, and the greater or less degree in which the iron ore is porous or permeable to the gases. Much, therefore, depends on the mechanical structure of the ores, and the ease or difficulty of smelting operations as at present conducted, is in almost direct ratio with the porosity or the compactness of the ore; the Northamptonshire and Cleveland being examples of the first description, while the hard, compact, magnetic oxides, the compact specimens of Cumberland hematite, and forge or mill cinders, represent the class of materials more difficult to operate upon. But taking the most favourable specimens—say a lump of Northamptonshire or of Cleveland ore—the removal of the oxygen from the oxide of iron commencing at the outside, and gradually penetrating inwards, is a process requiring a very long exposure to the action of the carbonic oxide, the volume of which passing up through the furnace is necessarily enormously in excess of the amount actually required for the removal of the oxygen of the iron ore. Two modes of reducing the waste of fuel arising from this imperfect action of the carbonic oxide on the iron ore are now in use. The first by raising the temperature of the carbonic oxide to the highest attainable point by heating the blast to an extreme degree, and the other by lengthening the ascending column of carbonic oxide through which the descending column of ore must pass—that is to say, by increasing the height of the furnaces.

Where the character of the fuel and of the ores will permit either or both of these plans to be put in practice they result in a considerable economy of fuel, and we see the temperature of the blast raised in some instances so high as 1000° or 1200° Fahr., and two of the most recently-built furnaces in the North of England are, as we have before mentioned, 105 ft. high. But both these methods have their disadvantages. To raise the temperature of the furnace to an excessive degree, and thus attempt to make up for the insufficient way in which the iron ore is exposed to the action of the carbonic oxide by raising the carbonic oxide itself to an excessive temperature, lessens the waste of fuel, but the affinity of the carbonic oxide for oxygen becomes developed to such an intense degree that its reducing powers become not only sufficient to remove the oxygen from the oxide of iron, but also to remove the oxygen from the silica generally associated with all iron ores in greater or less quantities, and also to re-

duce other metals from their earthy bases. These, especially the silicon, alloying with the pig-iron, render it weak and brittle, becoming where much silicon is present what the workmen term "rotten." The disadvantages of very high furnaces are more of a mechanical description. From the great depth and consequent pressure of the column of materials they become so compressed in the furnace that much additional engine-power is required to force the blast into the furnace; the coke must all be of the hardest and strongest kind to enable it to "carry the burden," and any derangement resulting from wrong filling, variation in quality of materials, or other cause, is difficult to remedy, and becomes a matter of very serious loss.

We have already seen that the removal of the oxygen from the oxide of iron has to be effected by its exposure to the action of heated carbonic oxide, and we have shown how the result is arrived at in existing furnaces. It is, of course, evident that the more thoroughly we can bring each particle of the oxide of iron under the action of the carbonic oxide, the more rapidly and completely will the carbonic oxide remove the oxygen from the iron ore. The porous nature of Northamptonshire and Cleveland ores facilitates the penetration of the carbonic oxide gas; the close mechanical structure of the magnetic oxides, and of the hard compact samples of hematite ore, retards this penetration, hence the comparative ease with which the former, and difficulty with which the latter, are reduced.

When the chemist wishes to produce metallic iron from its oxide, he exposes the oxide in the most minute state of division to the action of the heated reducing gas, and the oxygen is removed in a few minutes. When he wishes to assay a sample of iron ore he pulverises and mixes his iron ore, charcoal, and flux, and half-an-hour's time is sufficient for the removal of the oxygen from the ore, the carbonisation of the iron and the combination of the flux with the earthy matter, thus producing a button of cast-iron, with its concomitant cinder or slag, doing on the small scale, in fact, precisely what the blast-furnace does on the large. But we need not dwell on this point. To anyone acquainted with the most elementary principles of chemistry it is known that the more closely and more intimately any two bodies can be brought into contact with each other the more rapid and complete will be their re-action upon each other.

The remark naturally arises that if the reduction of the iron ore would be so greatly facilitated by such a simple process as that of crushing or pulverising the ore, why has it not been already in operation? Doubtless it would have been, but for an insuperable mechanical difficulty. When iron ores in a pulverised condition are discharged into the blast-furnace the particles of iron ore fill up the interstices of the coke and limestone, and form one dense mass from top to bottom, through which it is impossible for the blast to penetrate. But this difficulty, insuperable in the present blast-furnace arrangements, simply proves those arrangements to be inadequate to a true solution of the problem, which is—in what manner can the iron ore be subjected to the action of carbonic oxide gas, so as to secure the most rapid and effectual removal of the oxygen from the oxide of iron. As already shown, this can only be effected by bringing the iron ore into a finely divided condition; hence our second deduction—that the iron ore must be crushed or pulverised.

[To be continued in next week's Journal.]

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY.

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

HENRY BUNNING, Jun., of New Cross, has specified a patent relating to apparatus for burning combustible liquids in furnaces. In order to burn creosote and other combustible liquids in furnaces, the patentee places within the furnace a receiver, which is supplied with the liquid to be burnt by a pipe leading to a cistern above the level of the receiver, and this pipe has a stop-cock upon it, by means of which the quantity of liquid entering the receiver can be regulated. Within the receiver it is preferred to have a number of partitions, dividing its interior in such a manner as to form a zigzag passage through it; the liquid enters the zigzag passage, and, after circulating therein, it issues as highly-heated vapour; this vapour passes into a pipe having a stop-cock or regulator upon it, and beyond the stop-cock or regulator the pipe is perforated, and through it the vapour issues into the furnace by numerous jets, and is consumed. This arrangement admits of the heat being entirely under control, as the passage of the vapour into the furnace can be arrested at any moment, or adjusted as the requirement of the moment may dictate.

Mr. EDMUND RICHARD SOUTHBY, of Lanark, Scotland, has obtained a patent for separating paraffin from its solutions, and in apparatus therefor. His invention consists in cooling a solution of paraffin in a vessel of moderate depth, by preference closed and fitted with agitators and scrapers, or equivalent details, which keep the solution constantly stirred, and prevent the paraffin from adhering to the sides. By this means the paraffin is obtained in small, distinct, and very uniform crystals, which are very easily drained and pressed. When the cooling and crystallising has proceeded to any required extent the liquid is separated from the crystals by draining in bags, and pressing, or by any other well-known process.

JOHN ROBERTS and JABEZ MORGAN have specified a patent for joining metallic pipes. In joining metallic pipes, according to this invention, the ends to be joined are made flat, so that when they are pressed together with an india-rubber or other washer between them they make an air and water-tight joint. On the outside, and near the end of each pipe, a series of three or other number of projections are made, the outer sides—that is, the sides most distant from each other—being inclined in opposite directions. A detached collar or ring of metal is made of a size suitable to fit on the ends of the pipes to be joined, and having on its interior surface two series of projections, equal in number to those on the ends of the pipes. The one series of projections is at such a distance from the other series that when the ends of the two pipes are brought together the projections on the said ends of the pipes fit between them; on sliding the collar or ring on the end of the pipes it is turned into such a position that its projections are not presented to those on the pipes. It is then moved so as to bring it equally over the ends of the two pipes, and a motion of partial rotation is given to it.

THE NEW HAUPT ROCK DRILL.—In last week's Journal we gave the particulars of some recent experiments with the new Haupt drill at the Miners' Lime Quarries, Wrexham; we are informed that the machines are now at work in several places, and that we shall shortly be furnished with the results arrived at, which, of course, we shall have pleasure in placing before our readers. We are also glad to learn that Messrs. Blanchard and McKean hope to have one of their new machines at work at Falmouth, at the forthcoming annual meeting of the Miners' Association.

NEW TELL-TALE.—An ingenious and useful indicator for registering the revolutions of wheels, the number of strokes made by steam-engines, &c., has been invented by Mr. BATHIAS, and in use gives very satisfactory results. The instrument consists of a simple system of cog-wheels enclosed in a case, measuring 6 in. x 4 in., and 3 in. deep. These wheels are put in motion by the movement of a handle or bar, and from their freedom from springs and simplicity of action cannot get out of order. The indicator can easily be adapted to all kinds of machinery, but their principal sale has hitherto been found amongst the railway companies, who have commenced to appreciate their value for ascertaining the distance travelled over by their rolling stock, and determining the quantity of fuel required for their locomotives, wear and tear, &c. As the indicators are made to register 999,999 revolutions, it will be easy to calculate the distance travelled by a vehicle, if the number indicated before and after making a journey and the circumference of the wheel be known. For mining and colliery operations it can be usefully employed for many purposes, not the least important perhaps in connection with collieries being the registration of the amount of work done with the winding gear, ropes, &c., so as to enable those in charge to judge when they require a thorough examination, whilst its price is not too high to permit of its very general use.

ANTI-SMOKY CHIMNEY STOVE.—Mr. THOS. NASH, jun., of Great Dover-road, Southwark, the well-known inventor and manufacturer of the copper-bound painters' brushes, has recently patented certain

Improvements in domestic stoves and grates, their object being the promotion of more perfect combustion, and the prevention of that too prevalent evil a smoky chimney, as it is commonly termed. Mr. Nash provides the back of the stove or grate with a hot-air chamber—that is, behind the grate-back he has a hollow space or chamber, the air in which becomes heated by conduction from the back of the stove or grate when the back gets heated by the action of the ignited fuel therein. The aperture for the passage of the smoke or products of combustion is not as in ordinary stoves or grates a mere opening, allowing such smoke or products to pass directly to and up the chimney, but has a sort of hood or deflector, which brings the smoke or products of combustion within the action of the rarefaction of the air in the hot-air chamber, and by the power of the upward current thus created ensures the ascent of the smoke or products of smoke; downward currents being opposed by the rarefied air thus generated in the lower part of the chimney, in the hot-air chamber, and in the fire-place, as well as by the hood or deflector, preventing any sudden downward gust passing direct on to the ignited fuel, but causing it to be brought within the influence of the heated air in the hot-air chamber, and thereby destroyed.

REPORT FROM MONMOUTH AND SOUTH WALES.

SEPT. 17.—It is satisfactory to be able to report that the increased demand for rails which lately sprung up continues, Russia being the principal customer; and, as the shipping season to that country will shortly close, the mills are pretty well employed, so as to complete the contracts in hand, and ensure delivery this year. Whether it can be said that a permanent improvement has set in in the Iron Trade is open to doubt, for it is only right to add that many are of opinion that when the Russian season closes there will be another relapse to former inactivity. The low freights which prevail are an inducement to expedite the shipments, consequently the exports, although in excess of the corresponding period of last year, cannot be taken as an unquestionable proof that the trade has entered upon a prosperous career. On the other hand, there are those who think that when the Russian season closes continental requirements will have so increased as to keep the works quite as well employed as at present. Should this prediction prove correct, prospects at the commencement of next year cannot fail to be decidedly more cheerful than they have been for many years past. Prices have hardened a little, and this, probably, has caused the slight decrease which has taken place in the purchases of American buyers, who for the last three months have been the best customers to the makers of South Wales. Transactions with British India are extremely limited, and the last mail only brought a small addition to existing engagements. Home buyers continue to enter into transactions with caution, present prices not tempting them to purchase largely. Very few railway extensions are being carried on, therefore it is evident that the chief dependence must be placed on the permanent requirements of the existing companies. Bars are being exported to the continental markets, and for pigs there is an average sale. The Tin-Plate works are fairly employed, the demand for plates continuing tolerably good.

Steam Coal proprietors entertain a hope that the trade is now about to experience a revival, and already there is an increase of orders on the books. A difficulty, however, has to be encountered by merchants and shippers, owing to a want of suitable tonnage for the most distant ports, hence the exports are hardly above the average. There is a slight increase in the demand from the French markets, but that cannot be said respecting the mail packet stations, at several of which a large quantity of the coal sent out during the time of the Abyssinian expedition still remains on hand. The House Coal trade is rather inactive.

Success has at last attended the praiseworthy enterprise of the proprietors of Dinas Colliery, Rhondda Valley, a fine vein (the 4-foot), 6 ft. 11 in. thick, having been struck at a depth of about 400 yards. The quality of the coal is excellent, and there is every prospect that the new discovery will prove a source of great wealth to the proprietors, and of prosperity to the district generally. Mr. Harrison, the manager, deserves a word of commendation for the skill he has displayed in carrying on the operations. The Dinas pits are the oldest in the Rhondda Valley.

The Monmouthshire Railway and Canal Company half-yearly meeting was held on Wednesday.—Lord Tredegar in the chair. The directors' report, which recommended a dividend at the rate of 4 per cent. per annum, showed that 12,637L had been received for the carriage of coal during the six months, and 7689L for iron, as compared with 14,525L and 7961L respectively in the corresponding half of 1867.—Mr. Cartwright at some length criticised the policy of the directors. The purchase of the Brecon Canal he held to be a mistake, and that allowing the old line to pass into the hands of another company was a fatal error. He also opposed the proposed subscription to the Alexandra Dock. Mr. Batheeler commented on the conduct of Mr. Gratrex, a director, claiming 5000L for his interest in a tramway, which had cost him two years ago only 100L.—Mr. Gratrex explained that his solicitor made the claim without his knowledge, and he had since agreed to leave the matter entirely in the hands of his co-directors.—Mr. Hutchings said the suspense account was an unsatisfactory one, and other shareholders urged the closing of the capital account.—Mr. Powell, in reply to Mr. Cartwright, said the company could buy the old Runcy now if they desired it.—Mr. Batheeler, Mr. Phillips, and others, supported the proposed subscription towards the Alexandra Dock, as it was of the highest importance to the Monmouthshire Company that increased dock accommodation should be provided.—The report was adopted, and the dividend recommended declared. The proposed subscription of 20,000L towards the Alexandra Dock was confirmed unanimously.

The arrivals at Swansea include—the Henry Ranking, from Huaseo, with 70 tons of silver ore and 406 tons of copper regulus, for H. Bath and Son; Asia, from Sunderland, with 420 bales of timber (fir) and 1187 deals, to order; Alma, from Quebec, with a cargo of timber, for Richardson Brothers; Fanny, from Tilt Cove, with 490 tons of copper ore, for H. Bath and Son; James, from Buctouche, with 5673 pieces of deals and ends, for Richards, Power, and Co.; Faestern, from Antwerp, with 170 tons of iron ore, for J. D. Jones; Sprite, from Santander, with 220 tons of iron ore, to order; Marie Zoe, from Bilbao, with 135 tons of zinc ore and 8 tons of copper ore, to order.

The sale of the BLAEN CEFN COLLIERY property, which is to be effected in London, by Messrs. HUMBERT and COX, on Wednesday next, is looked forward to with much interest by those connected with the locality, it being generally felt that the property offers an opening for the establishment of a very lucrative business, and that its energetic working will be of great local advantage from the large amount of employment which it will give. The property contains the well-known Mynyddyswyn vein of house coal. The history of this Mynyddyswyn seam is particularly interesting—it was first discovered about the middle of the last century, and since been proved to extend beneath the entire Blaen Cefn estate without a fault, and to be of the thickness of 6 feet throughout, so that, calculating the yield at 1000 tons per foot of coal per acre, and the profit at only 1s. per ton, this single seam would give nearly 250,000L profit. In order to work the vein to the greatest advantage, it has been wrought from three distinct points—the whole of the coal being workable by levels from the side of the mountain, sinking is altogether unnecessary.—and these workings have since been known as the Great Cwm, Blaen Cefn, and Blaen Cefn Iron Collieries. When the works were first opened the only means of getting a market for the coal was by sending it in sacks on mule-back to the neighbouring towns, and it was not until the property passed into the hands of the late Mr. Thomas Powell (who opened a level at Blaen Cefn, and made a communication with the Monmouthshire Canal and the Crumlin and Newport tramway, by constructing an incline plane) that the Blaen Cefn coal acquired any celebrity. But the quality of the fuel being undoubtedly good, it soon obtained a high reputation in the several Irish ports to which Mr. Powell shipped it.

The Mynyddyswyn vein yielded a large annual income to its fortunate proprietor for many years, yet nearly one-half of the seam, even in the existing workings, remains untouched—the upper half being, in fact, the only part from which the coal has been taken. Throughout the district the Mynyddyswyn vein consists of two distinct strata, more or less remote from each other, the parting varying from a few inches to several feet; the upper stratum was about ½ ft. thick, and the lower one is about 2½ ft. That the working of this lower seam will require some engineering skill is beyond question, but there are certainly no such obstacles as will prevent its profitable development. It is not alone the Mynyddyswyn vein upon which the success of those who undertake the development of the property would depend, for both coal and ironstone, of excellent quality and in ample quantity (the coal seams, for example, varying from 2 ft. to 9 ft. in thickness). The Crumlin red-ash coal—the first important vein below the Mynyddyswyn—is found dropping out in many places on the adjacent lands to the east, and which on the western side has been discovered in a pit near the Union Foundry, at Llanhilleth, at the exact depth previously calculated. All the inferior seams of coal, and the different seams, layers, or balls of limestone, have been proved by actual workings in a circuit round the property commencing at Blaenavon, and continued through the Vorteg, the lands of the British Company of Penryn and Gwynnos, of the Pontypool Company, of Cwmbran, Risch, Abercarn, and thence upwards to Nant-y-Glo. The Blaen Cefn property is situated in an unusually advantageous position both for the shipment of the produce and for transporting it by railway; and, if it falls into the hands of an influential capitalist or company, there can be no doubt that its acquisition will prove alike beneficial to its new owners and to the colliers of the district.

TRADE OF THE SOUTH WALES PORTS.—The following are the returns of the quantity of coal shipped during the month of August and the corresponding month of last year:—

EXPORTS.	August, 1868.	August, 1867.
Cardiff.....	Tons 183,892	Tons 188,356
Newport.....	28,913	28,585
Swansea.....	45,641	45,681
Llanelli.....	9,276	15,462
SHIPMENTS COASTWISE.	August, 1868.	August, 1867.
Cardiff.....	Tons 77,569	Tons 84,420
Newport.....	65,170	80,084
Swansea.....	21,004	32,630
Llanelli.....	12,563	23,884
Newport also exported 14,721 tons iron; Cardiff, 11,146 tons iron and 2844 tons		

patent fuel; and Swansea, 2151 tons iron and 5213 tons patent fuel. The Russian and American markets were the principal customers for iron.

DEATH OF MR. G. W. LENOX.—We have to announce the death of Mr. George William Lenox, of Ynys-ygharad, Glamorganshire, in his 70th year. Deceased was a partner in the firm of Brown, Lenox, and Co., chain and cable manufacturers, whose extensive works are at Pontypool, and it may be truly said that as an employer he was universally beloved by his workpeople.

REPORT FROM NORTHUMBERLAND AND DURHAM.

SEPT. 17.—There is not much change to notice in the Coal and Coke Trades; dullness is still complained of in some quarters, although the general state of trade certainly is much improved. At Jarrow, one of the principal seats of the iron manufacture, there is a great improvement, and renewed activity is apparent in most branches of trade on the Tyne.

On Saturday the Marquis of Bute attained his majority, and the occasion was marked by festivity and rejoicing greater than that displayed at any "coming of age" in Great Britain for many years past. The colliers, cottagers, farmers, and agents belonging to Garesfield, Burnopfield, Bransleap, Dilton, and Clow Dene, in Durham, celebrated it in a hearty and most admirable manner. To signalise the event, a new pit was opened out, at a depth of 31 fms. from the surface, to the low seam, from which will be obtained some of the famous Brockwell seam. The first draw took place on Saturday morning, under the superintendence of Mr. John Chambers, the skilful engineer, whose father and grandfather have preceded him in office on the estate, and whose joint service has extended over a period of 130 years. The new working will be called the Bute Pit. The estates belonging to the Marquis of Bute in Durham county alone amount to 2500 acres. It is stated that the Marquis's income is 1000L a-day. After the dinner, Mr. Wardell proposed the toast of the day—"The Health of the Marquis of Bute," and, in doing so, eulogised in strong terms the character of the late Marquis, and expressed a hope that the present Marquis would follow in his footsteps. The Rev. John Mathew proposed "The Health of the Agents and Workmen of the Colliery," and praised the conduct and character of the workmen, who, he said, are remarkable for industry, honesty, and also charity when required. A more settled and industrious race of miners, indeed, cannot be found than those in the district referred to. After the dinner a ball took place, and at dusk the long avenue was illuminated, fireworks enlivened the scene, and a large bonfire was lighted on Pontop Pike, the highest hill in the county of Durham.

Mr. Jackito Nomuran, a Japanese, who came to the North a year or two ago, and placed himself under the instruction of Mr. R. Simpson, viewer to the Tynley Coal Company, in order that he might acquire a practical knowledge of coal mining, has left England for Japan.

ANGLO-DANISH TELEGRAPH CABLE.—This important undertaking was completed during last week, so that a communication is now open with North-Eastern Europe and this country by a route much more direct than any previously open. The cable commences at Newbiggin, on the Northumberland coast, and passes over the bed of the German Ocean to Sonderburg, near Rinkjoberg. The project of direct telegraph communication between Great Britain and the northern countries of Europe—Sweden, Denmark, and Norway—has long been before the public, and various routes have been proposed. The task of constructing the cable was entrusted to Messrs. R. S. Newall and Co., of Gateshead. The diameter of the shore end of the cable was fixed at 1½ in., and for the deep water a much less diameter is used. The weight is 3 tons per mile at mid-sea, and the shore end is 6 tons per mile, and the insulation of the core has been effected by means of India-rubber, and this is the first instance in which this substance has been applied to a wire of such great extent. Hitherto it has been thought that nothing could be accomplished without gutta serena, but the successful manner in which the present line has stood the most delicate tests proves that another great scientific triumph has been accomplished.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

SEPT. 17.—The Iron Trade really presents no change; but as its position just now is of considerable importance it may be worth while to re-state the plain facts. Let it be, then, remembered that we have had a very long period of dullness, followed by many months of great depression, during which many ironmasters failed, and many works were closed, and so the possible make greatly reduced. This long-continued want of orders led to prices being officially reduced, and with them wages, and from this step dates a recovery in the demand. But before the reduction was carried out there was a strike, and after that was over the excessive heat of the weather considerably curtailed the make of iron. The improvement has, therefore, followed a diminished production and a long-protracted depression, during which, as orders could be completed quickly, buyers kept stocks low. Past experience has shown that when stocks are so reduced, and it is found that orders cannot be at once executed, merchants begin to apprehend difficulty in supplying their customers, and even a possible advance in prices, and so order more freely; but this may be temporary. The actual results are that the works, which early in July were hardly going half-time, are now generally pretty well employed, though all the works certainly are not. Many ironmasters were forced to accept very low prices to keep on at all. They are now creeping up a little, and men who can pay ready money, and, consequently, buy on the best terms, find they can hardly get iron as cheap as before. The orders are, however, as yet far from being sufficient to make the works really busy; there are few works with many in hand, and any advance in price has been from a very low figure, and has been of slight account. Again we are getting near the end of the shipping season, when there is some pressure to execute orders, and after which there is often a degree of slackness. The result is that the trade, after a long period of prostration, is recovering steadily on lower rates being accepted, and we hope and expect the improvement will continue; but there is no ground for entertaining the idea of an early advance in prices. Let us see the winter over, and then if by March there is a continued influx of orders, and a fair prospect, the question of prices may be mooted. Meanwhile, it is worthy of consideration, or rather re-consideration, what benefit arises from these fixtures of prices by a few firms, and whether the discussion the practice excites, taken in conjunction with the general disregard of the list so agreed upon, does not constitute a reason for discontinuing what has really become obsolete. Pig-Iron is in better demand, and vendors are asking a slight advance. A few small buyers are giving it, but most have made forward contracts, and are biding their time. An advance of 5s. per ton in pig-iron would soon cause a number of furnaces to be blown in.

The prosecution for the non-consumption of smoke in Hanley has ended in the dismissal of the cases, on account of a formal defect in the proceedings; but Mr. Davis, the stipendiary magistrate, in giving his decision on Monday, made a general statement as to the application of the Act of considerable importance. He observed:—

"Any chimney (except that of a private dwelling house) sending forth black smoke in such quantity as to be a nuisance constituted such an offence as might be suppressed, and he thought it no answer whatever to such a description of nuisance to say that the nature of the manufacture or trade did not admit of its suppression. Once established that black smoke issued in such a quantity as to be a nuisance there was no possible escape, as it seemed to him, for the suppression of the nuisance, even if it involved as a necessary consequence the suppression of any manufacture or trade. This was no new principle. Apart from any independently of the Nuisance Abatement Acts, it was clearly no answer to an indictment, or action, or injunction of a nuisance to say, 'Very true; this may be a nuisance to the public or to a private person, but I cannot carry on my manufacture or trade unless I am allowed to do what is complained of.' Mr. Davis believed the Legislature in 1866 was satisfied that to send forth black smoke in such quantities as to be a nuisance was not essential to carrying on any manufacture or trade, and, therefore, that no unreasonable restriction was imposed. The effect of the Act appeared to him to be merely to give a new mode of suppressing the nuisance, which before the passing of the Sanitary Act was, and is still, a subject either of indictment, or injunction, or action, according to circumstances. Quite independent of the above provisions was the suppressable nuisance of a fire-place or furnace not consuming its smoke. Under the 19th section of the Sanitary Act, 1866, any fire-place used for steam engines, or in any mill, or any manufacturing, or trade process whatever, which did not, as far as practicable, consume the smoke, was declared to be a nuisance. It was no answer to a nuisance of this description to say that no black smoke at all came from the fire-place or furnace, neither was it an answer to say that the smoke sent forth was not a nuisance, for the Legislature had made the fire-place or furnace a nuisance. There was a proviso allowing magistrates to say that there was no nuisance if they were satisfied that the fire-place or furnace was constructed in such a manner as to consume smoke as far as practicable, having regard to the nature of the manufacture or trade; and that such fire-place or furnace had been carefully attended to by the person in charge. The construction, without the attention, was not sufficient; nor was careful attention without the construction. It is pretty plain that Mr. Davis intends the Act to be a reality, and thence this is seen the difficulties will soon be surmounted. Smoke can be consumed, but it never will until authority says it must, and puts on the necessary pressure.

A large party of members and friends of the Mine Agents' Association of South Staffordshire and East Worcestershire visited the Pendlebury Colliery, near Manchester, on Monday, being received by the proprietors of the colliery, Messrs. Andrew Knowles and Son, and shown all over the works and the mines, which extend to the depth of 520 yards at the bottom of the shaft, that being increased to 720 yards at the extremity of the engine-planes, to which the visitors descended, and where they met with a degree of warmth of another

and hardly so pleasant a nature as that accorded them by the owners on their arrival, for at that depth the neighbourhood of plutonic regions is vividly suggested. The next day they went to the Leeds Exhibition. It is said that all societies rather tend to amusement than dry work, but as the days shorten we may expect that the association will take up the discussion of practical questions connected with mining, many of which demand careful consideration.

Last week satisfaction was expressed at the recent freedom from fatal mining accidents. No serious case has since occurred, yet there are five deaths to record—four in the North and one in the South Staffordshire district. At the British Iron Company's pit, near Cradley Heath, yesterday week, William James, a middle-aged man, with a wife and four children, was taking out a spurn, when a heavy piece of coal fell from the roof, and caused his death the next day.—Two men were killed on Tuesday at Newchapel Colliery, near Tunstall, belonging to Mr. Robert Heath, under circumstances that show how indifferent to danger colliers become. They fired two fuzes for the purpose of igniting shots placed in the mine, and to get out of the way gave the signal to be raised. They were being drawn up, when one of them shouted "Stop," and then said "Smash down again." Accordingly they were again lowered, and, having reached the bottom, they once more signalled to be raised, and just at that moment the two shots went off, and when they were got out they were dead. It was supposed at the inquest that one of the fuzes had gone out, and that the men descended to re-light it, though the other was burning. A verdict of "Accidental Death" was returned.—A boy 13 years old was killed at the Silverdale Company's Collieries, in North Staffordshire, on Saturday, by being accidentally struck in the abdomen by a moving wagon which he was trying to catch at. He died the next day. He was employed to drive a pony which drew the wagon.—An inquest was held on Saturday as to the death of a man named Sampson Sherratt, who was employed at the Ford Green Colliery, in North Staffordshire, and who as far back as Aug. 6 was hurt by being jammed between two moving wagons, and the result was his death. The ordinary verdict was returned.

Last week the banks of that portion of the Shropshire Union Canal which runs across the Wixhall Moss, near Whitechurch, suddenly burst, deluging the land for a considerable distance around. Relays of workmen have been employed since the accident, and have now made good the damage, the traffic to a considerable extent being resumed.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

SEPT. 17.—There is very little information to be dealt out with regard to the Iron and Coal Trade of Derbyshire different to what has been given during the last two or three weeks. With regard to the former, no material improvement has taken place, so that most of the large establishments are only kept moderately going. Still, as most of our iron-making districts are becoming active, there is every prospect that the makers in this locality, who are in a position to compete with any other part of the kingdom, will also be more fully employed. There is, therefore, a prevailing feeling that the worst has been reached, and already, in fact, we hear of improvements in some places, but so far not of much import, except to show the direction in which things are tending. There is an improving business doing in coal, and the tonnage going to London from Clay Cross and other places is on the increase, and fast assuming the proportions which are usual at this time of the year, although the falling off during the last four or five months was of a very marked character. The position of Derbyshire, however, is such that it must always ensure a great deal of the trade to London and the South, whilst the many new collieries being opened out on the Midland system, more particularly on the route of the branch between Sheffield and Chesterfield, give promise of a very large addition to the present tonnage going from that county, and will be the means of providing employment for many hundred additional hands. From the southern district, including Gresley, Swadlincote, and Ashby, there is also rather more doing, a considerable quantity of the coal going westward, by way of Tewkesbury and Cheltenham. Gas coal is also in rather better request, whilst the demand for coke continues very fair, both for the works in the district and for exportation to other iron-making localities.

There is no change in the state of affairs in Sheffield, most of the heavy steel branches being favourably off, whilst the lighter ones are far from active, particularly with regard to the inferior class of goods. The heavy armour-plate trade promises to be very active, and a large quantity is now being turned out. At Rotherham there has been considerable improvement at the various works, so that the mills are kept well going, and the puddlers and other workmen are fully employed. The foundries are also doing more, general castings and stove-grates being in request. Railway material is in active demand, and from Milton and Elsecar a large tonnage of rails is being forwarded by water to Goole for shipment to Lowestoft for local consumption. Plates and sheets are also being very largely manufactured, the former being for exportation to the East Indies, and sent to London for shipment. In Coal there has been a little more doing during the week, particularly in Silkestone for the London market, but the trade generally to the metropolis from the South Yorkshire district is not what can be termed good. The same may be said with regard to Lancashire, although some of our coalmasters are sending rather more to Stalybridge, Huddersfield, and also to Glossop, which, although in Derbyshire, owing to its mills, is generally looked upon as belonging to the former county. Considerable shipments of steam coal continue to be made from Hull to Grimsby for the North of Europe, and merchants are actively pushing forward in anticipation of the Baltic closing for the season, which may now be shortly expected. The trade by water is moderately good, and freights to Hull in a few instances slightly improved.

Sinking operations are being pushed forward in various parts of the South Yorkshire district, whilst Messrs. Booth and Co. have opened out their High Stile Colliery, which is situated within the town of Barnsley. The coal has been reached at a depth of about 120 yards in the Barnsley seam, and is about 9 ft. 3 in. thick. The coal, it is expected, is principally for local sale, which, so far as the town named is concerned, has hitherto depended on one or two collieries for supply.

TREAT TO WORKPEOPLE.—On Saturday last the men in the employ of the Messrs. Dawes, at Milton and Elsecar, were treated to a visit to the Fine Arts Exhibition at Leeds.

REPORT FROM SCOTLAND.

SEPT. 16.—Principally owing to a manoeuvre on the part of a speculative dealer, prices of Pig-Iron in this market were depressed at the close of last week, the object of the operation not being discerned at the outset. One of the "bulls" brought out a quantity of warrants, and threw them upon the market; and immediately after quotations had fallen considerably he again, very knowingly, became a purchaser at the decline beyond what he had sold, which was noticed, and a stop put to his proceedings by a rise in prices, now nearly equal to their best. Consequently the market opened firm on Monday, and yesterday a fair business was done at 53s. 11d. cash, and 54s. 2d. a month. To-day the market was good in the morning, at 53s. 10d. cash paid, but closed dull 53s. 9d. and 53s. 7½d. cash, and 53s. 10½d. a month accepted, sellers requiring 53s. 7½d. prompt buyers, cash in eight days. No. 1, g.m.b., 54s.; No. 3, 53s.; No. 1 Coltness, 53s.; Gartsherrie, 58s.; Calder, 56s.; Langloan, 55s. The exports of pig-iron for the week were 14,185 tons, and in the same week of last year they reached 16,310 tons. From Middlesbrough the imports exceed 72,000 tons, against some 33,000 tons in the same period of last year, a difference of 39,000 tons in favour of this year. Carnbroe furnaces, which had been out of blast some days last week, owing to a temporary strike, were re-let at the close of last week, and are now in operation. Finished Iron is in very good demand, and the advanced prices of second hands are being generally paid without demur, merchants being of opinion that higher prices will have to be paid for all classes of merchant specifications. Shipbuilding iron still meets with demand, at steady prices. Ironfounding is also improved, and a good trade is doing in miscellaneous castings. Several orders for rails have been sent hence to Wales, and, as an indication of how much trade has improved, the quotations are advanced 1L a ton over what was paid only a few months ago.

Coals, with the colder weather, have slightly improved in price for household purposes, but the ordinary qualities of shipping coal are without any change, only the market is firmer. The shipments of the week are large, being 30,155 tons, against 28,915 tons in the same week of 1867. The strike still continues at Govan Collieries, but the whole of the Staffordshire men have been sent home, with the exception of about a score. On Saturday three, and on Monday five, miners were remitted by the justices to the Sheriff, charged with having been concerned in the riotous proceeding near Shawfield Toll, noticed last week. Their apprehension has rather tamed the others into a present quietude.

Mr. Alexander McDonald, the miners' secretary, has been started as a candidate for Kilmarnock district of Burghs, with a recommendation from Prof. Beesley. His learned advocate and supporter thus relates his hopes and fears:—

Scotian, Acquisitor, Sept. 7.—I see that there is a disposition among the colliers to bring you forward for Kilmarnock. I sincerely hope that they may do so, and that they may be strong enough to carry you in. You are one of the few representatives of Unionism I know who would be able to fight the battle with effect in such an assembly as the House of Commons. Mr. Bouvier is not the sort of politician whom any constituency of workmen should return. His defeat would be a valuable lesson to his class, who only want to keep things as they are. Workmen, if they know their own interest, want to make almost

everything different from what it is, and their interest is the interest of society. If you are returned it will give me more pleasure than any other event of the election. You will stand all but alone in the House of Commons, and therefore you will be able to do little or nothing, but it will be the first note of preparation for the coming struggle, and everything must have a beginning. Those who begin do a great work, and deserve to be remembered.—E. S. BEESLEY.

What the "workmen's own interest" is, which McDonald is to help to bring about, by making a "beginning," is not expressed, if it is even known either to the learned professor or his confere.

Shipbuilding is getting somewhat quieter, but the amount of work is not by any means diminished.

A new fire-arm was tried here, in a shooting gallery, on Tuesday, with complete success. This gun is the invention of Mr. Samuel Bash, patent safe maker, and seems destined to effect a revolution among the rifles at present in use—either Snider, Needle, Chassepot, or other gun. The rifle specified can only be fired on an average 10 times per minute, with the necessity of being cleaned after a few minutes firing. The present invention, however, as proved to the satisfaction of those present, attained the extraordinary number of 28 shots per minute—about three times quicker than any known; but as the cartridges were not of professional manufacture, it is anticipated that 30 shots, or upwards, may yet be attained. In this invention there is no fouling, and the gun may be fired ever so often without cleaning, the cartridges dropping down at the breech after each shot, and they, again, may be filled and used some six or eight times afterwards, before being rendered useless. The piece, it is stated—although the trial range was limited—will carry as far as any other now in use. In the event of a soldier losing his fingers, the rifle, which is fired in two different ways, can still be operated on, for further service, by the palm of the hand. Mr. Bash, the inventor, who is a Berliner, 22 years of age, has been about one year perfecting his invention; the piece used was of his own construction, and until he gets it patented, the details must remain a secret. However, it may be mentioned that it is simpler than any now in use, and, in consequence, can be fabricated cheaper than either Chassepot, Snider, or the Needle. This gun only necessitates two movements to load and fire, while any other known rifle requires seven or eight. The invention is likely to attract immediate attention.

PRELIMINARY PROSPECTUS.

CWM DWYFOR COPPER MINE COMPANY (LIMITED), NORTH WALES.

Capital £10,000, in 10,000 shares of £1 each,
Fully paid-up on allotment.

BANKERS.
METROPOLITAN BANK, LONDON.

OFFICES,—9, SEGONTIUM TERRACE, CARNARVON.

This company is being formed for the purpose of working the valuable copper lodes and other mineral veins in the extensive property of the New Prince of Wales Slate Company, situated in the parish of Llanfangel-y-Pennant, in the county of Carnarvon, North Wales. This mineral property possesses advantages of an unusual character, being situated on the slope of a mountain, where the veins can be worked from 200 to 300 yards deep by levels alone. The ore, a yellow sulphure of copper, is of great richness and purity. A sample assayed by Messrs. Claudet and Co. produced nearly 19 per cent. fine copper, being about five times the average produce of Cornish copper ores. There is, also, in a cross lode a vein of silver-lead, which is believed to be of great value. The enduring character of these mineral veins is proved in the adjoining mines, the Dwy-y-Coed, the oldest mine in Wales, and which is still yielding a large amount of copper from a great depth below the valley, having been gradually worked down from the top of the mountain.

The copper lodes in Cwm Dwyfor were originally worked by common miners, who realised good profits from their working into the lodes at surface without tunnels, or the expenditure of any capital whatever. If properly worked by levels there is no doubt of large returns of copper, and corresponding profits. The advantages of working veins so rich in copper as these, without the drawback of expensive machinery, are very great, and can seldom be obtained.

The great cross-course of the country, which is believed to occasion all the deposits of copper in the lodes intersected by it, traverses this property. The report of Mr. Thomas Collier, appended hereto, will confirm the foregoing statement.

The company obtain the lease of these mineral veins for 30 years, and the use of the water, and abundant land for all purposes for about a mile in extent, for the sum of £5000, and a royalty of one-fifth of the produce. The purchase-money being so moderate, and the shares so limited in number and amount, and without any further liability, it may be reasonably expected that as soon as the returns demonstrate the fact of assured profits that the nominal value will be doubled or trebled. The Great Laxey Lead and Copper Mine, at a cost of £4 per share on 15,000 shares, is now saleable at from £17 to £18 per share. Applications for shares may be made, by letter, addressed to Mr. THOMAS HARVEY, 9, Segontium-terrace, Carnarvon.

REPORT.

Bangor Slate Quarries, Sept. 8.—This mine is situated in the parish of Llanfangel-y-Pennant, in the county of Carnarvon, North Wales. The lodes are parallel with, and adjoining, the celebrated Dwy-y-Coed Mine, the oldest copper mine in Wales now in work, and which is said to have been first worked more than two centuries ago. The bearing of the lodes is east and west, and abutting against the main cross-course of the country, which can be traced to the north of Snowdon, and southward to the sea, near Gricloch, a distance of about 12 miles. The lodes are imbedded in the conglomerate strata generally classed as the Cambrian, well known as being so productive for copper in the locality, and situated on the slope of the mountain, forming an angle of about 30°, averaging, where opened, over 2 yards in breadth, carrying two well-defined walls, and from their situation can be worked to the depth of 200 yards from levels alone. The length of the first level, of 200 yards, would give a depth of 100 yards. The second level, of 300 yards, would give 100 yards more; total, 200 yards. For many years these lodes were worked by common miners, for their own profit, who had to raise and dress the ore, and carry the produce on their backs for miles, out of which they realised good livings. The ore is yellow sulphure of copper, of high percentage, averaging at least from 10 to 12 per cent. for fine copper. A moderate amount expended in the opening of this mine, which would be chiefly for labour, would, in my opinion, produce a good percentage for the capital invested, as the only machinery required would be for inclines, tramways, and a crusher for the ore. At present there is a railway to within about 3½ miles of the mine, and likely to be extended to within a mile, by which the ore can be conveyed to the shipping port. From my experience of copper mining in Wales, I have no hesitation in stating that I consider this a proper and safe investment for capitalists, if fairly opened, and worked with economy, as no sinking or pumping is required, there being an abundance of water on the grant for washing and dressing the ore.—THOMAS COLLIER.

WEST ST. IVES CONSOLIDATED TIN MINING COMPANY (LIMITED).

Capital £10,000, in 10,000 shares of £1 each.

Deposit, 5s. per share on application, 5s. on allotment, 5s. in three months, and 5s. in six months after allotment.

Shares may be paid up in full, and 5 per cent. interest will be allowed on calls paid in advance. Share warrants for fully paid-up shares will be issued, payable to bearer, which will pass from hand to hand without transfer. According to the Companies Act, 1867, the names of the holders of such warrant shares need not be registered.

If no allotment be made, the deposit money will be returned in full.

DIRECTORS.

WM. ALDRED, Esq. (Messrs. Aldred and Maynes, Machinists), Manchester.
JACOB HARRISON, Esq., 2, De Grey Terrace, Leeds (Chairman of the Yorkshire Lead Mining Company).
BENJAMIN MORTON, Esq., Manufacturer, Linthwaite, near Huddersfield.
JAMES ROBERTS, Esq., Surgeon, Golcar, near Huddersfield.
THOS. STYRING, Esq., Huddersfield.
JOHN W. WILLIAMS, Esq., Manchester and Southport.

BANKERS.

The ALLIANCE BANK (Limited), LONDON; and KING STREET, MANCHESTER; and its other Branches.

SOLICITORS.

MESSRS. MARSLAND AND ADDLESHAW, 67, King-street, Manchester.

AUDITOR.

MR. J. A. BURNE, Accountant, 57, Princess-street, Manchester.

MANAGING CAPTAIN—CAPT. JOHN NANCARROW.

PURSER—J. M. KERNICK, Esq., J.P., St. Ives.

SECRETARY—MR. THOMAS ALDRED.

OFFICES,—28, PALL MALL, MANCHESTER.

MESSRS. HANNAM AND CO., of 449, STRAND, LONDON; and ROYAL INSURANCE BUILDINGS, MANCHESTER, beg to recommend the above undertaking to the notice of their clients and others.

Full particulars can be had on application to either of their offices.

BIRMINGHAM FINANCIAL COMPANY (LIMITED), OFFICES,—WATERLOO STREET, BIRMINGHAM.

CAPITAL,—HALF A MILLION,

Reserve fund, 12,000.

ADVANCES made upon approved real and other securities.

DEFERRED PAYMENTS on Wagon Leases and other contracts purchased or advances made thereon.

HENRY ALLEBUTT, Secretary.

ESTABLISHED 1844.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY.

101, CHEAPSIDE, LONDON, E.C.

EMPOWERED by Special ACT of PARLIAMENT, 25th and 26th Vic., cap. 74. Terminating annual premiums and benefits payable during life. PECULIAR ADVANTAGES OFFERED TO POLICY HOLDERS BY THIS SOCIETY.

The profits applied—first, in extinguishing the premiums AT A GIVEN DATE, and afterwards in making the policy PAYABLE DURING LIFE; this important advantage being secured without the payment of any additional premium.

ANDREW FRANCIS, Secretary.

EXTENSIVE AND VALUABLE MINERAL PROPERTY, MONMOUTHSHIRE.

MESSRS. HUMBERT AND COX are favoured with instructions from the proprietors to SELL, BY AUCTION, at the New Auction Mart, London, on Wednesday, the 23rd day of September, 1868, at Two o'clock, in One Lot, the VALUABLE MINERALS in and under 800 acres, comprising—

COAL, IRONSTONE, LIMESTONE, FIRE-CLAY, &c.

Situate in the parishes of LLANHILLETH and TREVEITHIN, about a mile from the Aberbeeg Junction, and half a mile from the Llanhilleth Station on the Western Valleys branch of the Monmouthshire Railway, and about four miles from Pontypool; together with the SURFACE, comprising about 700 acres of unenclosed mountain pasture, and an enclosed FARM of 97 acres, called Blaen Cuffin.

May be viewed by applications to Mr. THOS. HALL, the tenant, at Blaen Cuffin, and full particulars may be had at the Auction Mart; of Messrs. TAYLOR and SON, solicitors, 3, Field-court, Gray's Inn, London; or of Messrs. HUNTER, WATKIN, and HUNTER, 9, New-square, Lincoln's Inn, London; and of Messrs. HUMBERT and COX, estate agents and surveyors, 88, St. James's-street, London, S.W.

VALUABLE COLLIERIES AND IRONWORKS,

Situate near SWANSEA and NEATH, called

THE DYLAIS COAL AND IRONWORKS.

MESSRS. BARNARD, THOMAS, AND CO. WILL SELL, BY AUCTION, at the Mackworth Arms Hotel, Swansea, on Saturday, the 26th day of September, 1868, at One or Two o'clock in the afternoon, subject to such conditions as shall be then and there produced (unless previously disposed of by private contract, of which due notice will be given), ALL THOSE VALUABLE COAL AND IRONWORKS, known as

THE DYLAIS COAL AND IRONWORKS,

Situate near the towns of SWANSEA and NEATH.

The works are situated at the head of the Dylais Valley, partly in Glamorgan-shire and partly in Breconshire, and form an area of 1000 acres in a ring fence. The Onllwyn estate (consisting nearly of 700 acres out of the 1000 acres), comprises in the section the Upper Four Feet Coal, the Eighteen Feet, the Nine Feet, the Lower Four Feet, and other veins, and is held for a term of 36 years from the 1st day of January, 1861; and the Rhydyfoddu Cefn-yr-Hwnt and Castell Coch estate (consisting of the remaining 300 acres), is held for a term of 42 years, from the 24th June, 1864, and the royalties under both leases are low, as well as the dead rent.

On this property are two well-lined blast-furnaces, with six hot-air ovens; powerful blast-engines; five excellent boilers, with chimney-stack, &c., complete; foundry fittings, blacksmiths' and carpenters' shops, offices, storehouses, manager's house, and about 50 workmen's houses.

The property is admirably adapted for the erection of tin-plate works. There are also fine brick works, clay-mill, and five other steam-engines, with boilers, pumps, &c., on various parts of the property, together with trams, weighing-machines, and many miles of above and underground rail and tram-roads; also, tools, plant, &c.

The main line on the Neath and Brecon Railway, which is open and in daily work, intersects the Onllwyn tract, and brings the works into direct communication with the important shipping ports of Swansea and Neath.

For further particulars, apply to the auctioneers; to Messrs. STRYDOM and BELLINGHAM, solicitors, Swansea; or to FUSSELL and FRICHARD, solicitors, Bristol.

Companies Act, 1862.

RE GRONANT MINE COMPANY (LIMITED).

GRONANT SILVER-LEAD MINE.

Situate in the parish of LLANASA, in the county of FLINT, two miles from the Prestatyn Station on the Chester and Holyhead Railway.

MR. BELL has received instructions to OFFER FOR SALE, BY PUBLIC AUCTION, at the company's office in Gronant, in the parish of Llanasa, county of Flint, on Thursday, the 15th day of October, 1868, at Three o'clock in the afternoon.

The company's interest in the several LEASES, AGREEMENTS, and TACK NOTES of the MINERALS under the lands in the parish of LLANASA, therein specified, together with the ENGINES, MACHINERY, ROPE, TACKLE, LADDERS, MATERIALS, &c., now on or belonging to the Mine.

The minerals are held under leases granted from SIR PIERRE MOSTYN, Bart., the Rev. J. B. BROWN, and BALDWIN LLOYD, Esq., at moderate royalties, and extend from east to west about a mile and a quarter, and nearly the same length from north to south.

The MACHINERY comprises a 60 in. high-pressure expansive condensing ENGINE, with TWO BOILERS and PITWORK of the most approved character; THREE other excellent ENGINES, with BOILERS, one for pumping, the others for winding; CRUSHING MILLS, WHEELS, LADDERS, PRESSING FLOORS, and all other requirements, and all in most complete order.

Catalogues are now in preparation, and will in a few days be ready for delivery.

For further particulars, apply to Mr. JOHN S. BLEASE, the Official Liquidator, Commerce-chambers, Lord-street, Liverpool; Mr. WILLIAMSON, Solicitor; or Mr. BELL, Auctioneer, Holywell.

WHEEL MARGERY MINE, ST. IVES, CORNWALL.

THE WHOLE OF THE MACHINERY AND MATERIALS, consisting of a 45 inch cylinder STEAM PUMPING ENGINE; a 20 inch WINDING, STAMPING, and CRUSHING ENGINE, with BOILERS, complete; about 120 tons of 7, 9, 10, 11, and 12 inch PITWORK, and other MATERIALS and PLANT, together with the SETTS and LEASES, are hereby OFFERED FOR SALE, in One Lot, BY TENDER.

Capt. JAMES WILLIAMS, will attend every facility for inspection, and further information may be obtained of Mr. SAMUEL HIGGS, Purser, Penzance. Tenders for the above will be received on the mine on Wednesday, the 23rd inst., at noon.—Dated Sept. 4, 1868.

TUESDAY, 29th SEPTEMBER, 1868.

One o'clock Afternoon.

At WENTWORTH CONSOLS MINE.

Five Miles North of Truro, Cornwall.

FOR SALE, without reserve, to close the accounts, a 30-inch PUMPING ENGINE, bright gear work.

7 ton BOILER, and a few sundries.

Any further particulars, apply to Mr. J. BURGESS, the Auctioneer, Land and Machinery Valuer, Barncoose Farm, Redruth, Cornwall.

TUESDAY, 29th SEPTEMBER, 1868.

Twelve o'clock Noon.

At MINERAL BOTTOM MINE.

Five Miles North of Truro, Cornwall.

FOR SALE, without reserve, to close the accounts, a 72-inch ENGINE, bright gear work, 10 feet stroke.

10 arm CAPSTAN, oak axle.

CAST IRON CENTRE FOOT and TOP BLOCKS.

Any further particulars, apply to Mr. J. BURGESS, the Auctioneer, Land and Machinery Valuer, Barncoose Farm, Redruth.

MINES IN IRELAND.

TO BE SOLD, the LEASES OF TWO VALUABLE COPPER MINES, in the county of CORK, both containing parallel lodes with those of the celebrated BEREHAVEN MINES; also the LEASE of a VALUABLE LEAD MINE, in all of which considerable workings have been executed, and are eligible investments for either private enterprise or public companies.

Apply for further particulars to—

R. HODGSON SMYTH AND CO.,

MINERAL ESTATE AGENCY OFFICES,

No. 22, WESTMORELAND STREET, DUBLIN.

GLAMORGANSHIRE—TIN-PLATE WORKS.

TO BE SOLD, BY PRIVATE CONTRACT, ALL THOSE TIN-PLATE WORKS known by the name of

THE CWMFELIN WORKS,

Situate at CWMFELIN, in close proximity to the town of SWANSEA, together with the FORGE, ROLLING MILLS, ANNEALING FURNACES, PICKLING HOUSES, and other necessary conveniences, complete, as the same were lately carried on by Mr. David Davies, under the style or firm of David Davies and Sons.

The works are in perfect repair, in full operation, and capable of manufacturing twelve hundred boxes of tin-plates weekly.

The brands are well known in the market, and command full prices.

For further particulars, and to treat, apply to Messrs. STRICK and BELLINGHAM, solicitors, Swansea.

NORTH WALES—QUEEN'S FERRY, FLINT.

CLOSE TO THE RAILWAY.

TO BE SOLD OR LET, DESIRABLE FREEHOLD MANUFACTURING PREMISES, with ENGINE-POWER and LAND.—A plot of about one acre, with substantial factories, engine-house chimneys, stable, outbuildings, and sheds, suitable for any manufacturing purpose. ENGINE of most recent construction, and BOILER nearly new.

For further particulars, apply to JOHN TEMPLE, 32, Redcross-street, Liverpool.

FOR SALE,—A FIRST-CLASS SECONDHAND 8-horse power PORTABLE STEAM-ENGINE, of recent construction, by eminent makers.

NEW PORTABLE STEAM-ENGINES, from 5 to 25-horse power, of the highest order, on advantageous terms. Prize Medals awarded—Hamburg, 1863; Paris, 1867.

Apply to BARROWS and STEWART (late Barrows and Carmichael), Engineers, Banbury.

ENGINES AND BOILERS FOR SALE.

MESSRS. NICHOLLS, MATHEWS, AND CO. have FOR SALE ENGINES of VARIOUS SORTS and SIZES, AND SEVERAL GOOD TON BOILERS. All are in excellent condition, and well worthy the attention of purchasers.

Full particulars may be obtained by applying to Messrs. NICHOLLS, MATHEWS and Co., Tavistock Foundry, Tavistock.

TO BE LET—MINES IN CARDIGANSHIRE.

NANT-Y-CRIA AND DYFFRYN CASTELL.

THE COMMISSIONER OF WOODS, &c., in charge of HER MAJESTY'S LAND REVENUES IN WALES, is prepared to RECEIVE APPLICATIONS FOR LEASES of the NANT-Y-CRIA AND DYFFRYN CASTELL MINE SETTS, which are situate in the parish of LLANBADARNFAWR, county CARDIGAN.

The DYFFRYN CASTELL MINE is situate in the valley of the River Castell, about two miles from Pontefwyd. It is about fourteen miles from the Port and Railway Station of Aberystwith, about eleven miles from the Strata Florida Station on the Manchester and Milford Railway, and about fifteen miles from the Llanidloes Station on the Cambrian and Mid-Wales Railways.

The NANT-Y-CRIA MINE SETT adjoins that of Dyffryn Castell, and the mine works are about two miles south-west from those of the Dyffryn Castell Mine.

Applications should be addressed to "The Hon. JAMES K. HOWARD, Office of Woods, &c., Whitehall-place, London, S.W." Applications for each sett should be separate, and each application must be accompanied by a remittance of 5s. to Mr. W. C. HIGGINS, the Receiver-General at the Office of Woods, to cover the cost of the plan, &c.

IRONWORKS TO BE LET.

TO BE LET, with immediate possession, on LEASE, or otherwise, with option of purchase, the EXTENSIVE WORKS, lately the property of the

LIVERPOOL AND GARSTON STEEL AND IRON COMPANY (LIMITED), situated at GARSTON DOCK, near LIVERPOOL, in direct communication, by rail and River Mersey, with all parts of the kingdom.

These WORKS stand upon Nine Acres of Land, enclosed, of which the greater part is covered, and comprise PLATE MILL, large BEAM and BAR MILL, MERCHANT MILL, SHEET MILL, small MERCHANT GUIDE and HOOP MILL, FORGE, TWENTY-SEVEN PUDDLING MILL and BALL FURNACES, FORTY-ONE BOILERS, TWO DONKEY ENGINES, TWO powerful coupled horizontal and TWO vertical ENGINES, driving various trains of rolls; reverse gearing; guillotine, bar, and cropping SHEARS (each with engine); chimney 150 feet high, with flues all made thereto. The above are all covered by five spans of substantial slated, wood, and iron roofing.

There are also two bull-dog kilns, mortar mill in shed, tank-house, supporting a large cast-iron tank (into which water is pumped from a well to supply the large water service), and containing pumping and blowing engines, the latter blowing refinery and charcoal furnaces (these engines supplied from a large double-flued boiler), extensive mechanics' and smiths' shops, fitted and supplied with vertical engine and boiler, storehouses, stables, and offices, forming a handsome frontage in King-street. Drainage perfect.

The greater portion of the machinery, plant, and buildings is entirely new, and the remainder has only been a short time in work, and it is all of the newest and best construction, capable of turning out easily 600 tons per week.

Railways laid through all parts of the works.

A good stock of puddled bars (old rails, &c.) on the ground, which may be taken at a valuation.

Apply to BATESON, ROBINSON, and MORRIS, Solicitors, Castle-street, Liverpool.

TO BE LET, THE ANTIMONY MINES OF GLENDINNING, near LANGHOLM, the property of SIR FREDERIC JOHN WILLIAM JOHN STONE, of West-hall, Baronet. The works have not been in operation since 1799, but they have been carefully re-opened, and now are in order for examination by parties desirous to carry them on; the distance is about twelve miles from Langholm Station of the North British Railway, which gives ready access to London, Liverpool, and other markets. Canonbie Colliery is on the line of railway, where the price of coal is moderate, or it can be had at Langholm Station at nearly as moderate a price as at the coal pit.

Specimens of the ore will be seen at the mines, and information afforded on application to THOMAS C. BORTHWICK, Esq., Hopsrig, by Langholm; or Messrs. CAMPBELL, ESPIE, and BELL, W.S., 6, Rutland-square, Edinburgh; or Messrs. JOHN and G. H. GEDDES, Mining Engineers, 9, Melville-crescent, Edinburgh.

TO IRONMASTERS AND OTHERS.

TO BE LET, and entered upon in February next, a VALUABLE CARBONIFEROUS LIMESTONE QUARRY, LOW BISHOPLEY, FROSTLEY, county of DURHAM, contiguous to and connected by a branch line with the Wear Valley Railway.

Now in the occupation of Messrs. BOLCKOW, VAUGHAN, and Co. (Limited). Terms and further particulars may be had on application to Mr. R. F. MATTHEWS, Shotton Hall, Ferryhill.—July 28, 1868.

ON SALE, CHEAP.—

6 MONKEY PILES, about 16 cwt. each.
30 to 40 EARTH WAGONS.
500 tons DH RAILS, 75 lbs. per yard.
8 tons OLD LEAD.
1 ton OLD BRASS.
400 tons CAST IRON PIPES, 2 and 3 inches diameter.
200 tons CAST IRON PIPES, 12 inches diameter.
400 tons WROUGHT AND CAST SCRAP.
60 tons CONTRACTORS' RAILS, 45 lbs. per yard.

Apply to—
JOHN ROBERTS,
IRON MERCHANT AND METAL BROKER,
65, TOWER BUILDINGS EAST, LIVERPOOL.

TO COLLIERY PROPRIETORS.

UPWARDS of 6000 LARCH, 4000 OAK POLES, 100 OAK and OAK PLANKS upwards of 20 feet long; ELM COAL-PIT RINGS, ready cut, in stock.

All kinds of ENGLISH TIMBER supplied in the round, and OAK and LARCH SCANTLING cut to sizes for railway and coal-wagon building.

Dealer in all kinds of BRITISH TIMBER.
MILLWRIGHTS, ENGINEERS, COACH BUILDERS, WHEELWRIGHTS, &c., supplied on the most reasonable terms.

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JOHN DAVIS,
MANUFACTURER OF MINING AND SURVEYING INSTRUMENTS,
DERBY.

MAKER (by appointment) of HEDLEY'S DIALS.
STERNE'S PATENT PNEUMATIC SPRINGS FOR COAL CAGES.
Price List on application.

WILLIAM HANN AND SON beg to offer to SUPPLY COLLIERY OWNERS, and the public generally, with their

PATENT SAFETY LAMP.

Which has been proved INEXPLOSIVE in a current of gas of 44 feet per second. It is simple in its construction, burns well, and is in every respect a practicable lamp. It is made in two sizes, weighing 20 and 32 ozs. respectively. Price, 9s., at the works; if in quantities of a dozen or upwards, 8s. 6d. each, and delivered free. Orders received by—

WILLIAM HANN AND SON,

HETTON COLLIERY, FENCE HOUSES.

TO MANUFACTURERS OF YELLOW METAL, MERCHANTS, AND OTHERS.

CAUTION.

WHEREAS, it has recently come to the knowledge of the directors of ELLIOTT'S PATENT SHEATHING AND METAL COMPANY (LIMITED) that quantities of YELLOW METAL made by other Manufacturers have been exported to India and elsewhere, bearing a FRAUDULENT IMITATION of the exclusive BRAND or TRADE MARK of the company for Metal of that description—namely, a representation of a Rupee, with or without the word "soft" printed thereunder.

NOTICE IS HEREBY GIVEN, that in case any manufacturer, or other person, shall STAMP, IMPRESS, or AFFIX to or on any YELLOW METAL not made by the said company, the said BRAND or TRADE MARK, or any colourable imitation thereof, or in case any merchant or other person shall EXPORT or SELL any such Yellow Metal so marked as aforesaid,—PROCEEDINGS will forthwith be COMMENCED against such manufacturer, merchant, or other person to RESTRAIN him or them from such wrongful acts as aforesaid, and RECOVER DAMAGES in respect thereof.

RYLAND AND MARTINEAU, Solicitors to the said Company.

Birmingham, August, 1868.

IN THE TOWER FOUNDRY IS THE TYNE

ESTABLISHED MORE THAN HALF A CENTURY.
**THE TAVISTOCK FOUNDRY, IRONWORKS,
 AND HAMMER MILLS,**
 which have been carried on for more than half a century by
 MESSRS. GILL AND CO.,
 and obtained a
 HIGH REPUTATION FOR
 SHOVELS AND OTHER TOOLS
 as well as for
 ENGINEERING AND FOUNDRY WORK.
 have been purchased by
MESSRS. NICHOLLS, MATHEWS, AND CO.,
 BEDFORD IRONWORKS, TAVISTOCK.

For thirty years Messrs. NICHOLLS, MATHEWS, and Co., have been the proprietors of the latter works, but are now about to remove to the
TAVISTOCK FOUNDRY,
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 ROSIN DISTILLERS, GREASE AND VARNISH MANUFACTURERS,
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 MANUFACTURERS OF VEGETABLE OILS, &c.
 ANTI-FRICTION GREASE, 10s. to 14s. per cwt.
 Wire rope ditto, free from acid, 15s. per cwt. Liquid ditto (between thick and thin), for trams, &c., 2s. to 12s. per cwt.
 SKIP, HUTCH, CORVE, and WAGON OILS, from 8s. to 12s. per cwt.
 TORCH OIL, 1s. to 1s. 6d. per gallon.
 COPPER-SPOUTED QUART LAMPS, 4s.; TORCH WICK for ditto, 6d. per lb.
 PATENT ANTI-CORROSION BLACK VARNISH.
 "Paint Substitute for Wood or Iron," ready for use, 1s. to 2s. 6d. per gallon.
 We shall be glad to furnish a detailed price-list on application.
 Orders by post receive prompt attention.

WILTON'S MATHEMATICAL INSTRUMENT ESTABLISHMENT REMOVED
 from St. Day to A. JEFFERY'S, CAMBORNE.

W. H. WILTON begs to thank his friends for their very liberal support for many years, and informs them that he has now declined business in England in favour solely of Mr. A. JEFFERY, MATHEMATICAL INSTRUMENT MAKER, CAMBORNE, whom he considers (having been an assistant to his father for several years) is in every way capable of creditably maintaining the good name universally awarded to Wilton's Instruments.

A. JEFFERY

Respectfully begs to inform Mine Managers, Surveyors, Engineers, &c., that having purchased Mr. Wilton's business, and the very valuable acquisitions and appliances belonging thereto, he has enlarged his Mathematical Instrument Manufactory, and is prepared to supply THEODOLITES, DIALS, POCKET DIALS, LEVELS, TRAVELLING AND PLAIN PROTRACTORS, CASES OF DRAWING INSTRUMENTS, MEASURING CHAINS AND TAPES, ASSAYERS' SCALES AND WEIGHTS, ENGINE COUNTERS, and, in short, every description of Instruments used in SURVEYING, MEASURING, MAPPING, &c.
 Repairing in all its branches promptly attended to.

ESTABLISHED 1847.

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 INDIA RUBBER AND GUTTA PERCHA VALVES, &c.,
 WASHERS, BUFFERS, HOSE PIPES, TUBING,
 STEAM PACKING, BELTING,
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 AIR AND WATER PROOF ARTICLES.
 To proprietors of mines, quarries, mills, railway and steamboat companies, and all large consumers, most advantageous terms are offered.
 ANY ARTICLE MADE TO SKETCH OR PATTERN.
 PRICE LISTS AND SAMPLES ON APPLICATION.
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JOHN AND EDWIN WRIGHT,
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 MANUFACTURERS OF EVERY DESCRIPTION OF
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 PATENT FLAT AND ROUND WIRE ROPES,
 From the very best quality of charcoal iron and steel wire.
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 SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPULING, OIL SHEETS, BRATTICE CLOTHS, &c.
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 UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM
 CITY OFFICE No. 2, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

GARNOCK BIBBY, AND CO.,
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 MANUFACTURERS OF FLAT AND ROUND HEMP AND IRON AND STEEL WIRE ROPES FOR MINING, RAILWAY, AND SHIPPING PURPOSES.
 MANILLA ROPE OF SUPERIOR QUALITY, FIFTY PER CENT. STRONGER AND THIRTY PER CENT. CHEAPER than Russian hemp rope.
 WIRE ROPE OF FIRST QUALITY WIRE, and the HIGHEST STANDARD OF STRENGTH.

**CREASE'S NEW AND
 IMPROVED PNEUMATIC TUNNELLING ENGINE.**

THE PROPRIETORS of this INVENTION, in order to bring its CAPABILITIES more prominently before the PUBLIC, are OPEN TO TAKE CONTRACTS FOR DRIVING LEVELS.
 Preference will be given to ADIT LEVELS and those places where ROTARY MACHINERY is in use, and can be applied to driving the AIR COMPRESSOR.
 Address—E. S. CREASE, 7, Hoo-street, Plymouth.

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 No. 2, CROWN CHAMBERS, CROWN COURT,
 THREADNEEDLE STREET,
 CONDUCTED BY W. T. RICKARD, F.C.S., &c.
 (Late MITCHELL and RICKARD.)
 Assays and analyses of every description of mineral and other substances made, &c.
 Gentlemen going abroad for mining purposes instructed in assaying, and the most improved methods of reducing gold, silver, and other metals.
 MINING PROPERTIES INSPECTED AND REPORTED ON.

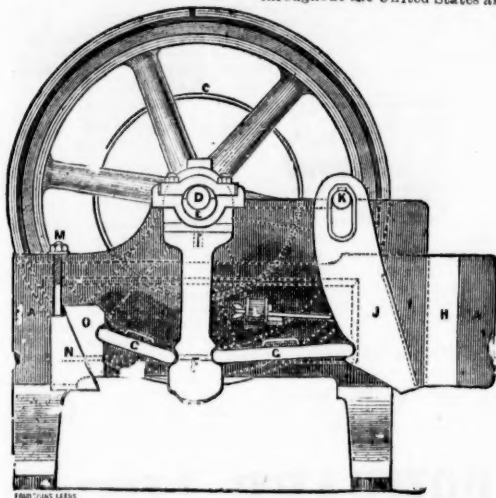
BRITISH, COLONIAL, AND FOREIGN PATENTS,
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CARLISLE BISCUIT COMPANY.—WHOLESALE AND EXPORT BISCUIT MANUFACTURERS, CARLISLE, & 56, CITY ROAD, LONDON. For twenty years their biscuits have maintained a high reputation. For export they are especially prepared, so as to keep in any climate. To wholesale buyers a liberal discount is allowed. Price lists forwarded on application.

MEAT BISCUITS FOR DOGS.
 MEAT BISCUIT FOR DOGS, made by the CARLISLE BISCUIT COMPANY, is undoubtedly the best, and cheapest food for dogs that has ever been introduced. It is equally adapted for sporting dogs, yard dogs, or for pets. It requires no cooking, and, without any other food, keeps dogs in the highest condition. Many of the prize-taking dogs at the last Birmingham show were fed, from puppies, on this biscuit. Price 20s. per cwt. at Carlisle; or at their depot, 56, City-road, London, 22s. per cwt. Post-office orders payable to WILLIAM SLATER, Cashier. Sold by corn chandlers everywhere. Book of testimonials from well-known corn &c. gentlemen, sent on application. Agents wanted.
 WILLIAM SLATER, Managing Director.

IMMENSE SAVING OF LABOUR.
 TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.
BLAKE'S PATENT STONE BREAKER,
 OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.
 It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Moreton reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
 For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
 H. R. Marsden, Esq. THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.
 WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.
 WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.
 Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
 JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.
 WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate.
 SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,
 MEADOW LANE, LEEDS,
 ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!
BLAKE'S PATENT STONE BREAKER,
 In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

PARIS EXHIBITION, 1867. SILVER MEDALS, CLASSES 40-51.

AWARDED THE ONLY FIRST-CLASS MEDAL FOR CRUCIBLES.

THE
PATENT PLUMBAGO CRUCIBLE COMPANY,
 SOLE MANUFACTURERS UNDER MORGAN'S PATENT,
BATTERSEA WORKS, LONDON, S.W.

These Crucibles (MORGAN'S PATENT) were the only ones to which Prize Medals were awarded in London, 1862; Dublin 1865; New Zealand, 1865; and Oporto, 1865.

They have been in use for many years in the English, Colonial, French, and other Foreign Mints; the English, French, and other Arsenals; and have been adopted by most of the large Engineers, Founders, and Refiners at Home and Abroad.

The capabilities which have now for more than twelve years distinguished these Crucibles are:—

Their quality is uniform. They withstand the greatest heat without danger. Their average durability for Gold, Silver, Copper, and other ordinary metals is forty to fifty pourings, in some cases reaching one hundred. They never crack, and heat more rapidly than any other kind. One annealing only is required. Change of temperature has no effect. They can when hot from the furnace be dipped in cold water with safety. The saving of labour and metal is very great. (Messrs. BREEDEN and BOOTH, Birmingham, testify to the saving of 1 ton 2 qrs. 21 lbs. 4 ozs. of metal in melting 73 tons 6 cwt. of brass.) In Steel Melting the saving of fuel has been demonstrated to amount to a ton and a half to every ton of steel fused. For Zinc they last longer than iron pots, and save the great loss which arises from mixture with iron. Those for Malleable Cast-iron show an average working of seven days, doing each day nearly double the work of any other crucible.

As these crucibles last much longer than any others, it follows that the saving of metal must be great, because to each worn crucible a quantity of metal adheres. In fact, comparing these with other crucibles, the saving of metal and fuel alone is more than equivalent to their cost.



A are made in sizes varying from 2 ozs. to any required capacity, and are marked by the quantity of kilograms they will contain; thus No. 100 will contain 60 kilograms.
 B differ in shape, but correspond in all other respects with A, and are similarly marked.
 C are marked in English pounds—thus, a crucible marked 60 will contain 60 lbs.
 D are made expressly for steel in various sizes.

MORGAN'S PATENT CRUCIBLES

Can be made any shape or size required, and are stamped as below:—

Having secured new Patents
 for our Manufacture, and to
 prevent fraudulent Imitations,



we call particular attention
 to our Trade Mark, as here
 shown.

"It follows, with the persistence of a law, that originators should be beset by imitators, just as in the natural world the finest organic forms are most liable to parasitical growth."—Miss METEYARD'S *Life of Josiah Wedgwood, the Potter.*

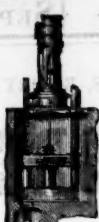
In all instances please specify "MORGAN'S PATENT," and address to—

BATTERSEA WORKS, LONDON, S.W.

Complete Illustrated List forwarded on application.

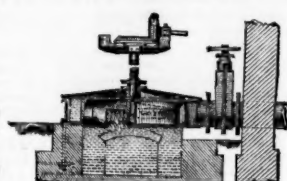


GWYNNE & Co.'s IMPROVED CHAIN-PUMP.
Worked direct by Steam-Engine.
These pumps work vertical cylinders without valves or der construct-packing, and raise a ton. The pump considerable quantity barrel and pipe of water. They will tonnage of gun-lift sand, mud, or metal, and the grit without choking, whole very and require only very strong and inexpensive repairs. compact.

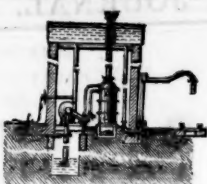


GWYNNE & Co.'s DOUBLE-ACTING PUMPING-ENGINE.
As supplied to the Admiralty Graving Docks, Malta, to lift from 200 to 2000 gallons per minute. The engine is of inverted

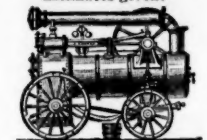
GWYNNE & Co.'s IMPROVED PLUNGER HAND PUMP.
A very neat and extremely compact arrangement; will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.



GWYNNE & Co.'s IMPROVED TURBINE WATER-WHEEL.
Compact, easy to erect, economical, simple, and perfectly adapted to all situations. Made of every power from 1 to 300 horse. These turbines are adapted for every class of work. Prices on receipt of particulars.



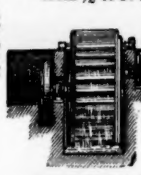
GWYNNE & Co.'s PATENT COMBINED STEAM-PUMP.
As Applied to Railway Stations.
The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c. Estimates given.



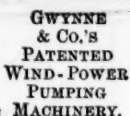
GWYNNE & Co.'s IMPROVED PORTABLE STEAM-ENGINE.
Light, simple in construction, durable, and economical, and very superior to "agricultural" engines. From 2 1/2 to 80 horse power.



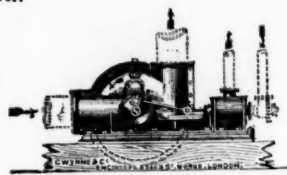
GWYNNE & Co.'s PATENTED WIND-POWER PUMPING MACHINERY.
Designed for Drainage and Irrigation Purposes.



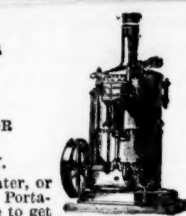
GWYNNE & Co.'s PATENT WATER POWER PUMPING MACHINERY.
Extremely useful wherever water-power is available. The centrifugal pump is worked by gear from the water-wheel. Suitable for supplying country mansions with water. No expense when once fitted. Made of all powers.



GWYNNE & Co.'s IMPROVED BULLOCK OR HORSE POWER PUMPING MACHINERY.
For situations where steam, water, or manions of noblemen or gentle-wind power are not available. Portable. Works continuously day and night without attention. Made out of order. From 1 to 6 horse power.



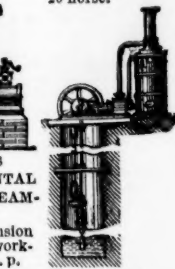
GWYNNE & Co.'s COMBINED STEAM-ENGINE AND PATENT CENTRIFUGAL PUMP.
Small and powerful, low in cost, economical in work. No skilled labour required. Inexpensive foundations. First Prize Medal awarded at Paris last year for this arrangement.



GWYNNE & Co.'s IMPROVED VERTICAL STEAM-ENGINE.
Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.



GWYNNE & Co.'s IMPROVED HORIZONTAL HIGH-PRESSURE STEAM-ENGINE.
With or without expansion gear, for economical working. From 4 to 100 h. p.



GWYNNE & Co.'s IMPROVED DEEP WELL PUMP.
Worked direct by steam-engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

ELEVEN PRIZE MEDALS, taken at the Exhibitions of the Principal Cities of the World, TESTIFY TO THE GREAT EXCELLENCE OF THIS MACHINERY.

TO PREVENT MISTAKES, PLEASE ADDRESS IN FULL—
GWYNNE AND CO.,
HYDRAULIC AND MECHANICAL ENGINEERS, ESSEX STREET WORKS, STRAND, LONDON, W.O.

TITANIC STEEL & IRON COMPANY, LIMITED,

MANUFACTURERS OF

BEST CAST STEEL FOR LATHE TOOLS, DRILLS, CHISELS, SNAPS, PUNCHES, SHEAR BLADES, TAPS, AND DIES,

BORERS AND ROCK-DRILLING, &c.,

SOLID CAST-STEEL HAMMERS,

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The Company's STEEL is made by the directions and under the supervision of

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HEATON'S PATENT.

THE LANGLEY MILL STEEL & IRONWORKS COMPANY

(LIMITED),

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Are now making Cast-Steel suitable for Tools, Taps, Dies, Chisels, &c., &c., Shear Steel, and Iron of a very superior quality, by their direct process, under the superintendence of the Patentee.

The range of quality which this process secures renders the Steel and Iron suitable for almost every purpose to which these metals can be applied. Also, CAST-STEEL CASTINGS of all kinds from PATTERNS or DRAWINGS.

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ST. GEORGE'S IRONWORKS, HULME, MANCHESTER,

Have the largest assortment in the Trade of PATTERNS,

SPUR WHEELS, BEVEL WHEELS, MITRE WHEELS.

FLY WHEELS, DRIVING PULLEYS, AND DRUMS

CAN BE SUPPLIED BORED AND TURNED, IF REQUIRED.

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STEAM HAMMERS,

1 1/2 cwt., 3 cwt., and 5 cwt., sizes, always in stock or progress.

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From 2 to 20-horse power. Small sizes usually ready for delivery.

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CRANES, HOISTING MACHINERY, &c.

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IMPROVED DONKEY PUMPS,

INJECTORS, SAFETY VALVES, STOP VALVES, and BOILER MOUNTING of every description.

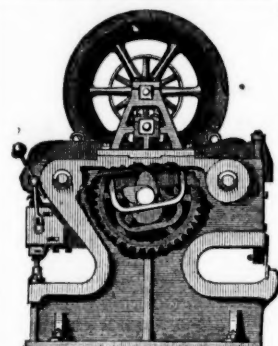
Special attention is called to their IMPROVED DONKEY PUMPS or INJECTORS, which are the best boiler feeders yet brought before the users of steam power. For boilers supplying steam to apparatus other than a steam-engine they are indispensable, and are rapidly supplanting the use of the feed pipe on the engine. They are also used for a great variety of other purposes. They are produced at a price which defies competition, and enables them to be supplied to those countries where a heavy duty has to be paid, in addition to the cost of carriage. They are used by all the leading firms of engineers at home and abroad. A stock of one hundred always on hand, from which orders can be executed without delay.

Size.	Diameter.	Stroke.	Galls. thrown per hour.	H.P. of boiler supplied.	Price.
4	1 1/4	2 1/2	150	10	£ 6 10 0
5	1 1/2	3	230	15	8 10 0
6	1 3/4	4	400	20	11 0 0
7	2	4	600	30	15 0 0
8	2 1/4	4	900	40	18 0 0
9	2 1/2	6	1200	75	17 0 0
10	2 3/4	6	1800	120	19 0 0

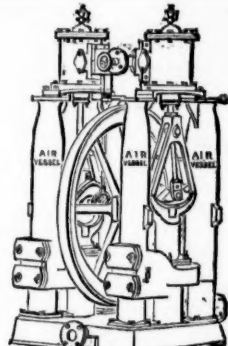
BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXHIBITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXHIBITION," in Paris, 1867.

BICKFORD, SMITH, AND CO.,
TUCKINGMILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL OF FUSE MANUFACTURED BY THEM has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.



JOHN CAMERON'S PATENT DOUBLE CAM LEVER PUNCHING AND SHEARING MACHINE.
1 1/2 x 1 1/4 in. x 24 in.—8 tons, £185.
WORKS, EGERTON STREET, HULME, MANCHESTER.



JOHN CAMERON'S STEAM PUMPS.
From 2 to 12 in. diameter, SINGLE AND DOUBLE-ACTING WORKS, EGERTON STREET, HULME, MANCHESTER.

THOMAS TURTON AND SONS,

MANUFACTURERS OF

CAST STEEL FOR PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c. CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION. DOUBLE SHEAR STEEL, BLISTER STEEL, SPRING STEEL, GERMAN STEEL, FILES MARKED T U R T O N, EDGE TOOLS MARKED WM. GREAVES & SON

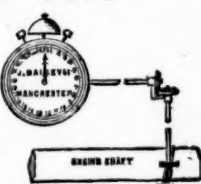
Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

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Illustrated catalogue of useful inventions, 6 stamps.

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Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

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CURE YOURSELF BY THE PATENT SELF-ADJUSTING CURATIVE AND ELECTRIC BELT.—Sufferers from spermatorrhoea, nervous debility, painful dreams, &c., can now cure themselves by the only guaranteed remedy in Europe, protected by Her Majesty's great seal. Free for one stamp by H. JAMES, Esq., Percy House, Bedford-square, London.
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WONDERFUL MEDICAL DISCOVERY,
showing the true causes of Nervous, Mental, and Physical Debility, lowness of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour in a few days, WITHOUT MEDICINE.
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 This agency affords West End operators facilities hitherto to be had only in the City.
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 Office hours, Ten till Four.

FOR SALE:—
 20 Chiverton, 15s. 10 Great Laxey, £184. 50 Wh. Grenville, £1 5s.
 15 Chiv. Moor, £2 8s. 9d. 15 Marke Valley, £7 6s 3 100 Wheel Crebhor, 1s. 6d.
 5 Cook's Kitchen, £9 12 6 30 New Lovell, 16s. 6d. 10 Wh. Kitty (St. Agnes),
 100 Drake Walls, 6s. 6d. 25 N. Trekerby, 3s. 9d. 10 Wheal Mary Ann, £19
 5 Ding Dong, 17s. 20 North Croft, £1 7s. 10 Wheal Seta, £47.
 10 East Basset, £9 15s. 50 Pr. of Wales, £1 17s. 5 Wheal Seta, £47.
 20 East Caradon, £2 11 3 20 Prosper United, 8s. 9d. 10 Wheal Treilawny, £9
 50 East Carn Brea, 4s. 9d. 4 Providence, £18 18s. 50 Gt. No. Laxey, 10s 3d
 75 E. Grenville, £2 11s 3d 200 So. Condurow, 7s 6d 50 Wheal Uny, £1 12s.
 45 East Rosewarne, 3s 9d 50 Tincroft, £12. 85 Chontales, £2 5s.
 50 East Seta, 17s. 50 Tamar Valley, £2 10s. 60 Don Pedro, £2 1/2 (pm).
 10 East Lovell, £6 16 3d 10 W. Caradon, £1 18 9 70 Frontino, £1 9s.
 50 Frank Mills, £1 5s. 6 West Chiverton, £2 1/2 70 Yudanama, £2 16 3
 25 G. No. Downs, £1 18 9 80 Drake Walls, 6s. 9d. 75 Snaefell, 10s.
 70 Gt. South Chiverton, 35 W. Gt. Work, £1 15 3
 10 Great Vor, £12 1/2. 40 Wheal Agar, 17s.

TAMAR VALLEY.—Our inspecting agent reports that the new engine will go to work at the end of this month, and as there are two fine silver-lead lodes to operate on there is no doubt as to good results. We strongly recommend the purchase of the shares at once.

Contract for Best Swedish, Best British, and Pig Iron.
 BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.
 NOTICE IS HEREBY GIVEN, that the DIRECTOR GENERAL OF STORES FOR INDIA, will be ready on or before Monday, the 21st instant, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY—
 BEST SWEDISH IRON,
 BEST BRITISH IRON, and
 PIG IRON.

And that the conditions of the said contract may be had on application, addressed to the Director-General of Stores, India Office, Westminster, S.W., where the proposals are to be left any time before Two o'clock P.M. of the said 21st day of September, 1868, after which hour no tender will be received.
 India Office, Sept. 12, 1868. GERALD C. TALBOT, Director-General.

Aldershot.—Army Contracts.—Flour and Meat.
 COMMISSARIAT OFFICE, SOUTH CAMP, ALDERSHOT.

TENDERS will be RECEIVED at this office until noon on THURSDAY, the 22d October, from persons who may be willing to enter into CONTRACTS for the SUPPLY of FLOUR (ration and hospital), cones for dusting loaves, and FRESH meat, for six months, from 1st December next to 31st May, 1869, for the use of Her Majesty's forces at Aldershot, and within the command.

Separate tenders are required for each of the above articles. Forms of tender and conditions of contract can be obtained on application at this office, by letter, or in person, between the hours of 10 A.M. and 4 P.M., where any further information that may be required will be furnished.

By order, H. HUTCHINGS, Deputy-Commissary-General.
 Commissariat Office, South Camp, Aldershot, 16th September, 1868.

Contracts for Salt Pork.
 CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 13th October next, at Twelve o'clock noon, they will be ready to receive sealed proposals from persons who may be willing to CONTRACT for SUPPLYING and DELIVERING into Her Majesty's Victualling Stores at the undermentioned Ports the following quantities of
SALT PORK,
 all of the cure of the present season, viz.:—
 DEFTWOOD 4800 tierces 4800 barrels.
 HAULBOWLINE 1800 " 1800 "

Each tierce of pork to contain 75 pieces of 4 lbs. each, and each barrel 50 pieces of 4 lbs. each, instead of the number of pieces formerly contained in the tierces and barrels.

The pork to be delivered into the respective stores as follows, viz.:—one-third of each quantity for each place by the 15th day of January, 1869; another third thereof by the 15th day of March, 1869; and the remainder thereof by the 30th day of April, 1869; or any greater portion, or the whole, at any earlier period, if preferred by the party tendering, and to be paid for by bills at three days after date, which will be sent to parties as usual.

Their lordships reserve to themselves the power, when the tenders are opened, of contracting either for the whole, or for such part thereof only as they may deem fit, or for a greater quantity, or of not contracting for any, and also an unlimited power of selection in accepting the tenders.

Every tender must specify the name of the person by whom the meat is intended to be cured, the brand of the meat, and the place of cure.

Tenders for pork of the cure of the United States of America will not be admitted.

Persons tendering for more than one port must give a separate tender for each port.

Persons tendering must give a reference to a banker for each surety proposed, and they are desired to take special notice that the use of wooden hoops is abolished, and that iron hoops only will be required for the casks, in accordance with the conditions of the contract.

A form of the tender may be obtained, and the recently altered conditions of the contract, to which particular attention is called, may be seen in the lobby of the department of Victualling, Somerset House; or by applying to the victualling storekeeper at Haulbowline; or to the collectors of Her Majesty's Customs at Bristol, Limerick, Belfast, Waterford, and Newry; or to the Secretary to the Postmaster-General at Dublin; or to the Commander conducting the Packet Service at Liverpool.

No tender will be admitted for a less quantity than 100 tierces, or 100 barrels. No tender will be received after Twelve o'clock on the day of tender, nor any notified unless made on the printed form provided for the purpose; but it will not be necessary that the party tendering, or an agent appointed by him, should attend, as the result of the offer received from each person will be communicated to him and to his proposed sureties in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner of the envelope the words "Tender for Salt Pork," and must also be delivered at the Department of the Controller of Victualling, Somerset House.

The contractors will have to pay one-half the amount of the stamps on the contracts and bonds.
 By order, ANTONIO BRADY,
 Registrar of Contracts and Public Securities.
 Contract Department, Admiralty, Somerset House, Sept. 10, 1868.

GOVERNMENT AND OTHER SECURITIES BOUGHT AND SOLD, AT NETT PRICES, AND FREE OF COMMISSION.

Messrs. TREDINNICK AND CO., CROWN CHAMBERS, THREEADNEDLE STREET, LONDON, E.C., are DEALERS, for cash or account, in the subjoined Securities, viz.:—

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 Foreign Bonds—Belgian, Dutch, Egyptian, Greek, Italian, Mexican, Peruvian, Portuguese, Russian, Spanish, and Turkish.

Preference Railway Shares and Stocks, Debentures, Bonds, and Ordinary Stocks and Shares.

Colonial Government Securities—Canada, Cape, New Brunswick, Australian, and New Zealand.

British and Foreign Mines.
 Dock, Insurance, Canal, Water, and Gas Shares.
 Mortgages and Loans negotiated in all saleable or recognised valuable properties and securities.

Advances made on Shares and Stocks in anticipation of sales, and all kinds of fiscal arrangements effected to meet the views of holders of really valuable property, yet requiring time to negotiate.

MR. RICHARD TREDINNICK, CONSULTING MINING AND RAILWAY ENGINEER, OFFERS HIS SERVICES in the purchase and sale of SECURITIES and PROPERTIES to those DESIROUS of INVESTING CAPITAL at these times of commercial depression; but more especially as regards Mining and Railway Stocks and Shares. He would impress on all the desirability of obtaining correct data ere they embark, as it frequently proves too late to retreat when engagements are entered into before advice is sought. Practical authorities may guard against disasters when applied to in time, but cannot be expected to counteract the effects of imprudent operations when mischief is already encountered. Consultation fee, One Guinea.

Crown-court, Threanedle-street, London, E.C.

MR. H. D. HOSKOLD, LAND AND MINERAL SURVEYOR, CINDERFORD, NEWHAM.

Gentlemen requiring reliable and correct information respecting any Coal or Iron Mine Property in the Forest of Dean may obtain it on application.

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INTERNATIONAL MINING AGENCY, OFFICE, SOMERSET HOUSE, PRINCE STREET.

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A. HEATHERINGTON, PROPRIETOR.

A Register kept of every description of Mineral Lands and Mining Shares for Sale.—Properties Viewed and Reported on, and their Purchase or Sale, when required, negotiated for a moderate commission.—The services of Explorers, Overseers, &c., engaged for Mine Owners.—Maps, Diagrams, Statistics, and useful information regarding each district supplied.—Returns made for absent proprietors.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.		Paid.		Last Pr.		Bus. done.		Total divs.		Per share.		Last paid.	
Shares.	Mines.												
1000 Alderley Edge, c. Cheshire	1000	1 8 0	—	—	—	—	—	1 8 0	0 10 0	—	—	July 1868	—
200 Botallack, c. St. Just	200	1 8 0	—	—	—	—	—	48 15 0	5 0 0	—	—	May 1868	—
4000 Brookwood, c. Buckfastleigh	4000	1 11 0	—	—	—	—	—	0 12 6	0 2 6	—	—	Aug. 1868	—
1000 Bronfloyd, c. Cardigan	1000	12 0 0	—	—	—	—	—	10 1 0	0 6 0	—	—	Aug. 1868	—
6000 Bwlch Consols, c. Cardigan	6000	4 0 0	—	—	—	—	—	0 5 0	0 5 0	—	—	June 1868	—
6000 Cashwell, c. Cumberland	6000	2 10 0	—	—	—	—	—	0 3 0	0 1 6	—	—	Aug. 1868	—
916 Cargoll, c. L. Newlyn	916	15 5 7	—	—	—	—	—	14 15 0	0 10 0	—	—	July 1868	—
5000 Creepshaw and Penkelt	5000	7 10 0	—	—	—	—	—	2 5 0	1 5 0	—	—	July 1868	—
128 Cwm Eirin, c. Cardiganshire	128	60 0 0	—	—	—	—	—	383 10 0	2 0 0	—	—	Aug. 1868	—
280 Dwynt Mines, c. L. Durham	280	300 0 0	—	—	—	—	—	177 0 0	2 10 0	—	—	July 1868	—
1024 Devon Gt. Consols, c. Tavistock	1024	1 0 0	—	—	—	—	—	1109 0 0	7 0 0	—	—	July 1868	—
656 Ding Dong, c. G. G. G.	656	49 14 6	—	—	—	—	—	0 10 0	0 10 0	—	—	Sept. 1867	—
358 Dolcoath, c. c. Camborne	358	128 17 6	—	—	—	—	—	852 10 0	4 0 0	—	—	Aug. 1868	—
6144 East Caradon, c. St. Cleer	6144	2 14 6	—	—	—	—	—	14 11 6	0 2 0	—	—	July 1868	—
3000 Eacarra, c. Cardiganshire	3000	160 10 0	—	—	—	—	—	160 10 0	0 0 0	—	—	July 1868	—
128 East Pool, c. c. Pool, Illogan	128	24 5 0	—	—	—	—	—	44 10 0	7 10 0	—	—	Sept. 1868	—
1906 East Wheel Lovell, c. Wendron	1906	3 9 0	—	—	—	—	—	4 1 6	10 0 0	—	—	May 1868	—
2800 Foxdale, c. L. Isle of Man	2800	25 0 0	—	—	—	—	—	71 10 0	0 10 0	—	—	July 1868	—
6000 Frank Mills, c. L. Christow	6000	3 18 6	—	—	—	—	—	3 5 6	0 5 0	—	—	Feb. 1866	—
3500 Gawton, c. Tavistock	3500	3 10 6	—	—	—	—	—	0 3 0	0 3 0	—	—	Jan. 1868	—
15000 Great Laxey, c. L. Isle of Man	15000	4 0 0	—	—	—	—	—	9 5 0	0 10 0	—	—	Sept. 1868	—
5000 Great Wheal Vor, c. L. Helston	5000	4 0 0	—	—	—	—	—	13 3 6	0 7 6	—	—	June 1868	—
1024 Herodaford, c. L. Liskeard	1024	8 10 0	—	—	—	—	—	40 10 0	1 10 0	—	—	June 1868	—
6000 Hingston Down, c. Calstock	6000	5 10 6	—	—	—	—	—	0 10 0	0 5 0	—	—	April 1868	—
165 Levant, c. c. St. Just	165	10 8 1	—	—	—	—	—	1095 0 0	2 0 0	—	—	July 1868	—
4000 Lieburne, c. Cardiganshire	4000	18 15 0	—	—	—	—	—	509 0 0	3 0 0	—	—	July 1868	—
3000 Maes-y-Safn, c. Flint	3000	20 0 0	—	—	—	—	—	3 15 0	0 15 0	—	—	Mar. 1868	—
9000 Marke Valley, c. Caradon	9000	4 10 6	—	—	—	—	—	4 9 0	0 4 6	—	—	July 1868	—
3000 Minera Boundary, c. L. Wrexham	3000	1 0 0	—	—	—	—	—	0 13 0	0 3 0	—	—	Mar. 1866	—
25000 Mining Co. of Ireland, c. L. c. L.	25000	25 0 0	—	—	—	—	—	239 13 0	0 0 0	—	—	Aug. 1868	—
40000 Mywynd Iron Ore	40000	3 5 0	—	—	—	—	—	0 8 6	0 2 0	—	—	Mar. 1868	—
200 Parys Mines, c. Anglesey	200	50 0 0	—	—	—	—	—	162 10 0	2 10 0	—	—	Aug. 1868	—
12800 Prince of Wales, c. Calstock	12800	0 12 6	—	—	—	—	—	0 7 6	0 1 0	—	—	Aug. 1868	—
1120 Providence, c. L. Uny Lelant	1120	10 6 7	—	—	—	—	—	85 2 6	0 10 0	—	—	June 1868	—
612 South Caradon, c. St. Cleer	612	1 5 0	—	—	—	—	—	592 10 0	6 0 0	—	—	July 1868	—
6000 South Caradon, c. St. Cleer	6000	3 6 6	—	—	—	—	—	0 13 0	0 1 6	—	—	Aug. 1868	—
937 South Croft, c. Illogan	937	2 10 0	—	—	—	—	—	0 10 0	0 10 0	—	—	June 1868	—
496 So. Wh. Frances, c. Illogan	496	18 18 9	—	—	—	—	—	574 13 6	1 0 0	—	—	Mar. 1868	—
800 Summer Hill, c. L. Mold	800	3 13 6	—	—	—	—	—	2 5 6	0 5 0	—	—	Feb. 1868	—
6000 Tincroft, c. c. Pool, Illogan	6000	9 0 0	—	—	—	—	—	19 16 0	0 5 0	—	—	Sept. 1868	—
2000 Trumpet Cons., c. L. Helston	2000	11 10 0	—	—	—	—	—	13 0 0	0 10 0	—	—	June 1868	—
3000 W. Chiverton, c. L. Perranzabuloe	3000	10 0 0	—	—	—	—	—	29 7 6	2 0 0	—	—	Aug. 1868	—
6000 West Godolphin, c. c. Breage	6000	0 1 0	—	—	—	—	—	0 2 0	0 2 0	—	—	Dec. 1867	—
5000 Wheal Seta, c. L. Camborne	5000	47 10 0	—	—	—	—	—	5 0 0	5 0 0	—	—	Aug. 1868	—
512 Wheal Seta, c. L. Camborne	512	2 0 0	—	—	—	—	—	632 10 0	5 0 0	—	—	June 1868	—
1024 Wheal Friendship, c. Tavistock	1024	20 0 0	—	—	—	—	—	800 10 0	0 10 0	—	—	Nov. 1866	—
512 Wheal Jane, c. L. Kea	512	10 10 0	—	—	—	—	—	—	1 0 0	—	—	July 1868	—
4295 Wheal Kitty, c. St. Agnes	4295	5 4 6	—	—	—	—	—	3 9 0	0 2 0	—	—	Aug. 1868	—
1024 Wheal Mary Ann, c. L. Menheniot	1024	8 0 0	—	—	—	—	—	66 0 0	0 17 6	—	—	Sept. 1868	—
80 Wheal Owies, c. St. Just	80	70 0 0	—	—	—	—	—	350 13 0	7 10 0	—	—	Feb. 1868	—
596 Wheal Seta, c. L. Camborne	596	58 10 0	—	—	—	—	—	264 15 0	2 0 0	—	—	Feb. 1868	—
3000 Whitehall Lead, c. Liskeard	3000	0 5 0	—	—	—	—	—	1 10 0	0 10 0	—	—	Dec. 1867	—
17000 Wicklow, c. L. Wicklow	17000	2 10 0	—	—	—	—	—	48 16 0	0 6 0	—	—	April 1868	—

FOREIGN DIVIDEND MINES.

35000	Alamillos, L. Spain	2 0 0	—	—	1 3/4 1 3/4	0 4 6.0	2 0.6.	Sept. 1868
20000	Australian, c. South Australia	7 7 6	—	—	—	0 1 6.0	0 0 6.	Aug. 1868
16000	Cape Copper Mining	7 0 0	5 1/4	—	—	3 2 6.0	0 10 0.	Feb. 1868
30000	Central American Association	1 10 0	—	—	—	—	—	—
76162	Don Pedro North del Rey	0 14 0	3 3/4	3 3/4	—	1 0 3.0	0 3 0.	Sept. 1868
70000	English and Australian, c. L.	2 10 0	—	—	—	1 11 10.	0 1 6.	Feb. 1868
25000	Fortuna, L. Spain	2 0 0	—	—	1 3/4 2	—	—	—
20000	Gt. Mining Assoc., c. Nova Scotia	20 0 0	—	—	—	23 10 0.	0 15 1/2	June 1868
10000	Guineas, L. S.	5 0 0	—	—	—	10 percent.	—	Aug. 1868
68000	Kapunda Mining Co., Australia	1 0 0	—	—	—	0 1 4.0	0 0 6.	May 1868
15000	Llaneros, L. Spain	3 0 0	3	2 3/4 3 3/4	—	11 15 0.	0 3 4.	Sept. 1868
50000	Pannicillo, c. Chile	3 0 0	1 1/2	1 1/2	—	10 percent.	—	Yearly.
6000	Peel River Land and Mineral	100 0 0	—	—	—	—	—	—
10000	Pontefract, s. L. France	20 0 0	—	—	—	5 6 2.0	0 11 1/2	May 1868
100000	Port Phillip, c. L. Cuneo	1 0 0	1 3/4	1 3/4 1 3/4	—	2 2 0.	0 1 0.	July 1868
120000	Scottish Australian Min. Co.	1 0 0	1 1/2	7/8 1 1/2	—	8 percent.	—	May 1868
11000	St. John del Rey, Brazil	15 0 0	21	18 3/4 19 1/4	—	81 10 0.	4 0 5.	Dec. 1867
13500	Vancouver Land and Mining	6 0 0	8	8 1/2	—	1 10 6.0	0 6 0.	May 1868
50000	Victoria (London) [25000 £ pd., 25000 12s. 6d. pd.]	—	—	—	—	0 9 7.0	0 7 7.	July 1868
40000	West Canada Mining Co.	1 0 0	—	—	—	0 19 6.0	0 2 6.	May 1868